

1998 Annual Water Monitoring Report

for

Laboratory for Energy-related Health Research and South Campus Disposal Site



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prepared by:
Office of Environmental Health & Safety
University of California
Davis, California

Dames & Moore
Sacramento, California
April 1999



DAMES & MOORE

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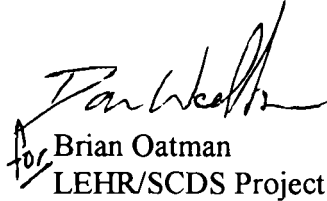
Re: 1998 Water Monitoring Report

Dear Ms. Timm, Mr. Austin, Ms. Brown, and Ms. Setian:

Enclosed please find one copy of the 1998 Water Monitoring Report for the LEHR/SCDS Site. This report presents groundwater, surface water, and storm water monitoring data collected in 1998.

If you have any questions about the enclosed document, please call me at (530) 752-6041, or write me at the following address:

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for Brian Oatman
LEHR/SCDS Project Manager

Attachments: 1998 Water Monitoring Report

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List of Acronyms

ATSDR	Agency for Toxic Substances and Disease Registry
COC	constituents of concern
CPT	cone penetrometer test
CVRWQCB	Central Valley Regional Water Quality Control Board
DOE	U.S. Department of Energy
FSP	Field Sampling Plan
HSU	hydrostratigraphic unit
IRA	Interim Removal Action
LEHR	Laboratory for Energy-Related Health Research
LFU	Landfill Unit
MCL	Maximum Contaminant Level
MOA	Memorandum of Agreement
PCD	Putah Creek Downstream Sampling Location
PCU	Putah Creek Upstream Sampling Location
QAO	Quality assurance objectives
QAPjP	Quality Assurance Project Plan
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
SCDS	South Campus Disposal Site
SOP	Standard Operating Procedure
STPO	Sewage Treatment Plant Outfall Sampling Locations
TDS	total dissolved solids
TIE	Toxicity Identification Evaluation
µg/l	micrograms per liter
USEPA	United States Environmental Protection Agency
UTL	upper tolerance limit
VOC	volatile organic compound
WDR	Waste Discharge Requirements
UCD1-X	Monitoring Well in HSU-1
UCD2-X	Monitoring Well in HSU-2
EW2-X	Extraction Well in HSU-2
IW2-X	Injection Well in HSU-2

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EXECUTIVE SUMMARY

This report presents the results of the 1998 Annual Water Monitoring Program conducted at the former Laboratory for Energy-Related Health Research facility and South Campus Disposal Site (LEHR/SCDS) (the Site). In addition to presenting water monitoring data collected during 1998, this report also includes an assessment of and recommendations for revisions to the water monitoring program.

Water Monitoring Program Assessment

Water monitoring has been conducted at the Site for more than nine years, and has involved the collection of over 1,000 water samples which have provided more than 100,000 analytical results. Based on these data, the following observations can be made:

- Six primary chemical constituents of concern (COCs) have been identified; chloroform, tritium, carbon-14, nitrate, total dissolved solids (TDS) and chromium. Chloroform, tritium, carbon-14, nitrate, and TDS impacts have been identified in the uppermost groundwater aquifer resulting from past Site activities. The monitoring data suggest that levels of chromium, nitrate and TDS are influenced by regional conditions and, within a regional context, site data are consistent with concentrations found throughout the region.
- The distribution of COCs within the first hydrostratigraphic unit (HSU-1) and HSU-2 has remained relatively stable during the last four years.
- The groundwater flow direction within both HSU-1 and HSU-2 has remained consistent during the past five years.
- Chloroform has been identified within HSU-4. The source of this chloroform and the hydrogeologic environment of HSU-4 are currently being evaluated.
- Chemical and aquatic toxicity testing results for storm water runoff samples collected through 1998 indicate that no releases of Site COCs have occurred in 2 years of monitoring, and no acute toxicity effects have been demonstrated for storm water runoff.
- Storm water runoff is the most direct pathway for site impacts to reach Putah Creek.

Proposed Monitoring Program

The basic format of the Water Monitoring program currently in place was designed as part of the Remedial Investigation (RI) for the Site to assess the extent of groundwater impacts resulting from previous operations of the Site. Many of the wells installed for this program are in areas with low to non-detectable concentrations of the Site COCs. The emphasis of activities at the Site are currently shifting from Remedial Investigation to Remedial Action/Design. During this transition phase, the main objective of the proposed groundwater monitoring program is to identify unexpected changes in the mass and distribution of COCs within the second hydrostratigraphic unit. To accomplish this objective, monitoring data only from wells located in the area of the majority of the mass are needed.

Each of the wells needed for the proposed monitoring network is included as part of a groundwater Interim Remedial Action (IRA) monitoring program currently operating at the Site. As such, the objectives of the proposed groundwater monitoring program are effectively duplicated by the IRA water monitoring program. Therefore, we propose that continued water monitoring and reporting at the Site include the existing IRA program and additional monitoring as required to meet overall needs for the Site. Also note that a system evaluation report summarizing the effectiveness of the IRA program is scheduled to be completed following the 12th month of operation of the groundwater IRA in May 1999. Additional modifications to the overall Water Monitoring Program, based on data collected from operation of the IRA system, will be presented in the IRA system evaluation report.

The proposed Water Monitoring Program includes the following:

- existing IRA groundwater monitoring program;
- monitoring of wells required to continue the HSU-4 RI investigation; and
- surface water and storm water monitoring.

The objectives of the proposed storm/surface water monitoring program are to monitor storm water runoff from the Site to Putah Creek and assess the presence of storm water constituents that could be present in runoff from the Site. Monitoring of storm water will continue for one additional rain season with sample collection occurring during two separate rainfall events. The analytical program will include both chemical specific testing and aquatic toxicity evaluations. Water collected from Putah Creek upstream of the Site will be used as a control during the toxicity testing to determine if any additive or mitigating effects from site runoff are occurring. Statistical evaluations will be employed to define background levels for storm water constituents in Putah Creek. These

background concentrations will then be used to determine if releases are occurring in storm water runoff. Surface water testing will be conducted in the event of a release through site runoff, or aquatic toxicity testing indicates potential harmful effects on freshwater aquatic life. Storm water runoff will be sampled at two locations; a location which collects runoff from the area of Landfill Unit (LFU) #1, and a location which will monitor runoff from LFU #3 and surrounding areas.

1998 Water Monitoring

In 1998, extensive water monitoring was performed at the Site in coordination with the RI/FS currently being implemented. The Revised Field Sampling Plan (Dames & Moore, 1998) specifies the sample collection, analysis, and quality assurance/quality control procedures and reporting requirements for the site water monitoring program. Appendix A presents an assessment of the data collected from groundwater, surface water and storm water monitoring.

Groundwater elevation data were assessed by compiling groundwater elevation hydrographs and elevation contour plots using the measured water level data. Groundwater flow directions for 1998 were similar to those reported in previous years. A decline in water levels across the Site occurred from April to August, primarily due to local agricultural pumping from HSU-2 and HSU-4. Additionally, since the IRA began operation in May 1998, a decrease in groundwater elevations in adjacent HSU-2 monitoring wells has been observed.

Approximately 19,800 analytical results were reported and validated for the 1998 monitoring data according to procedures outlined in the Revised Quality Assurance Project Plan. More than 98 percent of this data was determined to be acceptable.

In general, analytical results of groundwater samples during 1998 were similar to those reported in recent years. Reported concentrations of constituents of concern, including tritium, carbon-14, nitrate and chromium in site wells were similar to those found in 1997.

A measurable effect on chloroform and other VOC concentrations in monitoring wells located near the IRA extraction well was demonstrated after three months of system operation. Chloroform concentrations increased in the monitoring wells near the extraction well and decreased in the downgradient wells in both HSU-2 and HSU-4. A decrease in the number of downgradient wells with reported detections of other VOC constituents was also demonstrated. These trends continued through the fall quarter.

Surface water samples were collected in 1998 during the winter, spring and summer quarterly sampling events. Surface water samples were not collected during the fall quarter monitoring event since no significant runoff from the Site occurred in the fall of 1998. In general, reported constituent concentrations in the downstream location were very similar to those values reported for the upstream location. Some correlation between concentrations reported for the campus wastewater treatment plant outfall and the downstream location were also observed.

Storm water samples were collected from three monitoring locations in February 1998. Few constituents not known to be naturally occurring in area soils were reported in the site storm water and not in the upstream surface water location. Survival bioassay results indicated no acute toxicity affects for storm water runoff in 1998.

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1.0 INTRODUCTION

This report presents the results of the 1998 Annual Water Monitoring Program conducted at the former Laboratory for Energy-Related Health Research facility and South Campus Disposal Site (LEHR/SCDS) (the Site). In addition to presenting water monitoring data collected during 1998, this report also includes an assessment of and recommendations for revisions to the water monitoring program.

The requirements for this program are specified in the *Site Water Monitoring Plan* (PNNL, 1994, revised 1996) as modified by the *Final Revised Field Sampling Plan* (Dames & Moore, 1998a).

The water monitoring program specified in these documents is based on goals developed as part of the Remedial Investigation/Feasibility Study (RI/FS) (U.S. Department of Energy, 1994) for the Site. These goals include:

- Provide regular groundwater monitoring data to assess impacts to groundwater due to the presence of former waste disposal areas at the Site;
- Provide seasonal storm water runoff monitoring data to evaluate if chemical releases from the Site are occurring and to address chronic toxicity effects from site runoff to Putah Creek; and,
- Support development and conceptual design criteria for interim and final soil and groundwater remediation.

For the RI/FS process to be effective, the accomplishment of these goals should be reviewed annually and the program modified as needed to stay consistent with the current goals of the project. Water monitoring has been conducted at the Site for more than nine years and, to date, a comprehensive review of the data with regards to the accomplishment of the RI/FS goals has not been completed. As such, the principal purpose of this report is to assess the overall water monitoring program for the Site and, based on this assessment, present a revised water monitoring program consistent with the current objectives.

To meet the requirements of the current water monitoring program, this report also provides a detailed analysis of 1998 water monitoring results in accordance with the

Final Revised Field Sampling Plan (Dames & Moore, 1998a). This presentation is included in Appendix A, and evaluates and discusses:

- Water monitoring data for groundwater and surface water and storm water samples collected during 1998;
- Groundwater, surface water and storm water constituent concentration trends for 1998;
- Changes in the hydrogeological model, including groundwater gradient and the hydraulic influence of the groundwater Interim Removal Action (IRA); and
- Data validation methods and results.

The format of this 1998 Annual Water Monitoring Report represents a departure from previous annual reports and is organized into six sections and four appendices. Section 1 includes this introduction. A summary site description is included in Section 2. An assessment of the current groundwater, surface water, and storm water monitoring programs is presented in Section 3. Section 4 includes recommendations for continued groundwater, surface water and storm water monitoring, and Section 5 presents the scope and schedule of data reporting for groundwater, surface and storm water results. A list of cited references is included in Section 6. Appendix A includes the 1998 annual water monitoring results, including a discussion of the objectives of water monitoring, a discussion of site hydrogeology including the IRA hydraulic influence, and groundwater, surface water and storm water analytical results. Comprehensive tables of 1998 analytical results for groundwater, surface water and storm water are included in Appendix B. Maps of maximum detections in samples collected during Hydropunch™ investigations are included in Appendix C. A discussion of the abandonment of a former private irrigation well, located off-site and which had potentially created a conduit between hydrostratigraphic units, is presented in Appendix D.

2.0 SITE DESCRIPTION

The Site is located in Solano County, California, approximately 1.5 miles southwest of the city of Davis (Figure 1). The Site is in the southern portion of the UC Davis campus and is bounded by University research and agricultural facilities, private farmland and the South Fork of Putah Creek. The Site covers approximately 15 acres and contains laboratory buildings and former animal handling facilities.

Responsibility for investigation and remediation of the Site has been divided between the DOE and UC Davis by investigation area (UC Davis, 1997). Therefore, the assessment of the water monitoring program presented in this report, and recommendations for modifications to the program, are based on the needs of continuing work that will be conducted specifically by UC Davis at the Site. For the purposes of the additional investigations and future monitoring activities, the UC Davis portions of the Site have been divided into the following investigation areas:

- The waste burial holes located south of the eastern dog pens;
- The eastern trenches between Landfill Unit no. 1 (LFU #1) and LFU #2;
- The southern trenches along the south side of the western dog pens;
- The UC Davis LFU #1;
- The UC Davis LFU #2;
- The UC Davis LFU #3;
- Surface water and storm water impacts from the above areas; and
- Groundwater.

Other investigation areas on the Site, consisting of the southwest trenches, the former Imhoff system, the Ra-226 system, the domestic septic tanks, the cobalt 60 field, and the eastern and western dog pens, remain the responsibility of the U. S. Department of Energy (DOE). The UC Davis and DOE Site investigation areas are shown on Figure 2.

The South Fork of Putah Creek is the principal surface water feature in the region. Putah Creek flows eastward from Lake Berryessa, and ultimately empties into the Yolo Bypass approximately 8 miles east of the UC Davis campus. Flow in Putah Creek is regulated by releases from Monticello Dam at Lake Berryessa and the Solano Diversion Dam. The South Fork of Putah Creek also receives treated effluent from the UC Davis Waste Water Treatment Plant via an outfall pipeline upstream of the Site. Seasonal runoff from UC Davis portions of the Site enters the South Fork at two locations; near Landfill Unit No. 1 and Landfill Unit No. 3, respectively (Figure 2).

3.0 ASSESSMENT OF CURRENT WATER MONITORING PROGRAM

This section presents an assessment of the current water monitoring program. This assessment includes a presentation of relevant background information, a discussion of the current understanding of groundwater impacts, a summary of the surface water and storm water monitoring program, and a discussion of the degree to which the existing goals of the water monitoring program have been met.

3.1 Groundwater Monitoring Program

This section summarizes background information that is relevant to the assessment of the groundwater monitoring program. Background data, including site stratigraphy, hydrogeology and groundwater quality, can be used to better understand subsurface distribution and movement of constituents of concern.

3.1.1 Site Stratigraphy and Hydrogeology

Figure 3 presents a schematic cross section of the Site hydrostratigraphic units. The subsurface stratigraphy for the Site has been evaluated from geologic well logs and cone penetrometer test (CPT) logs collected during field investigations. Descriptions of site stratigraphy and hydrogeology based on the results of these investigations have been reported in the 1995 Annual Water Monitoring Report (PNNL, 1996), and the 1997 Annual Water Monitoring Report (UC Davis, 1998). Five hydrogeologic units have been identified: the vadose zone, and four hydrostratigraphic units referred to from shallowest to deepest as HSU-1, HSU-2, HSU-3 (formerly the "unnamed aquitard"), and HSU-4. The vadose zone and HSU-1 consist primarily of unsaturated (vadose zone) and saturated (HSU-1) clay and silt with interbedded discontinuous lenses of sand and gravel which occur from ground surface to approximately 85 feet bgs. HSU-2 consists primarily of sand and gravel, and occurs between approximately 85 and 125 feet bgs. The hydraulic conductivity of HSU-2 is at least 100 times that of HSU-1 in both horizontal and vertical directions. HSU-1 and HSU-2 represent the upper, or first, aquifer encountered beneath the Site. Underlying this upper aquifer is HSU-3, consisting primarily of clay and silty clay with thin intervals of sand. This unit is approximately 90 feet thick, and extends to an approximate depth of 250 feet bgs. Underlying HSU-3 are the sands and gravels of HSU-4 that extend to approximately 280 feet bgs. HSU-4 represents the deeper, or second, aquifer unit beneath the Site.

Hydrographs have been maintained for monitoring wells completed in HSU-1 and HSU-2 for over six years. During these six years of monitoring, the groundwater flow direction has been very consistent within each HSU as illustrated on Figure 4. Shaded radial segments of the compass rose indicate the frequency of the observed groundwater

gradient direction in terms of the percent of the quarterly measurements taken between 1994 and 1998. The groundwater gradient in each HSU was evaluated based on three wells located within the principal mass of COCs. The figure shows that in HSU-1 between 1994 and 1998, the lateral groundwater gradient direction was consistently within the range of north, 45 to 60 degrees east for approximately one third of the time. Nearly 75 percent of the measurements show a consistent flow direction within the relatively narrow arc of north 30 to 75 degrees east. The lateral gradient is even more consistent in HSU-2. Approximately 70 percent of the HSU-2 measurements taken from 1994 to 1998 show a gradient direction of north 75 to 90 degrees east.

Vertical groundwater gradients between HSU-1 and HSU-2 are typically downward during the agricultural pumping season, which generally lasts from April through August. During the rainy season vertical gradients typically become upward, from HSU-2 to HSU-1 (UC Davis, 1998).

3.1.2 Groundwater Constituents of Concern

Groundwater investigations conducted at the Site during the past nine years have included the collection of over 1,000 water samples which have provided more than 100,000 analytical results. From these data, the Site COCs have been well established. A summary and analysis of the groundwater sample data has been presented in several previous reports, including the Phase II Site Characterization Report (Dames & Moore, 1993), and the 1993, 1994 and 1995 Annual Water Monitoring Reports (PNL, 1994, 1995; PNNL, 1996). Based on the findings from quarterly monitoring and Hydropunch™ sampling, several site constituents are consistently reported in groundwater. These parameters include chloroform (and associated VOCs), chromium, nitrate, TDS, tritium and carbon-14. The distribution of each of the COCs is discussed below in Section 3.3.

3.1.3 Current Quarterly and IRA Groundwater Monitoring Programs

Quarterly groundwater monitoring at the Site began in November 1990 as part of the Phase II Site Characterization (Dames & Moore, 1993). The groundwater monitoring network initially consisted of eighteen wells. Development of the groundwater monitoring network to the current total of 41 wells is described in the Final Revised Field Sampling Plan (Dames & Moore, 1998a). Construction information for these 41 wells is listed in Table 1. Locations for additions to the groundwater monitoring network have been guided by a series of Hydropunch™ investigations. These Hydropunch™ investigations were conducted in the spring and fall of 1991, the fall of 1994, the summer of 1995 and the fall of 1996. Maximum concentrations of COCs based on analytical results of the Hydropunch™ samples are shown in Figures C-1 through C-12 in Appendix C.

Important expansions of the quarterly groundwater monitoring program have occurred as a result of the off-site groundwater investigation initiated in 1997, and a groundwater IRA groundwater monitoring program initiated in May 1998. The off-site groundwater investigation included installation of three wells within HSU-4 and two wells within HSU-2. These wells have been monitored since the fall of 1997 to assess groundwater gradients and off-site groundwater impacts in an area suspected to be impacted due to cross-contamination via an irrigation well. This irrigation well was abandoned in December 1998. A description of the abandonment is included in Appendix D.

The groundwater IRA was initiated in May 1998 to extract and treat groundwater from HSU-2 with an air-stripper prior to reinjection at an up-gradient location. The IRA was designed to remove chloroform and other volatile organic compounds (VOCs) and to prevent downgradient off-site migration of these contaminants. As part of the IRA, nine monitoring wells were installed. These nine wells, together with eight existing wells, were incorporated into the IRA groundwater monitoring program to evaluate the performance of the IRA. Quarterly sampling of the nine new wells began in the Fall of 1997. Monthly sampling of the entire IRA monitoring network and IRA operation reports began in May 1998 and will continue for one year in accordance with the IRA Waste Discharge Requirements Order No. 97-223 (WDR) (CVRWQCB, 1997).

A review of the current quarterly groundwater monitoring network and the IRA shows that the IRA groundwater monitoring program largely duplicates the scope of the current quarterly groundwater monitoring program. The current groundwater monitoring program, including the IRA monitoring program and off-site investigation wells, is shown in Table 2 and illustrated in Figure 5. The IRA groundwater monitoring network is shown in Figure 6. As mentioned previously, the current quarterly groundwater monitoring program was presented in the Revised FSP (Dames & Moore, 1998a) and was initiated with the summer round of sampling in 1997. Wells which are sampled annually have been sampled in the Winter Quarter (February) and wells sampled semiannually have been sampled in the Winter and Summer Quarters (February and August). Wells scheduled for quarterly sampling are sampled in February, May, August and November.

3.2 Distribution of the Principal Mass of COCs in Site Groundwater

To support decisions necessary to develop an effective groundwater remedial action, an understanding of the distribution and stability of the principal mass of COCs in groundwater is essential. Development of this understanding has been a principal goal of the existing groundwater monitoring program. This goal has been accomplished based on the current understanding of the distribution of the principal mass of COCs in

groundwater as illustrated on Figures 7 through 24. These figures show isoconcentration plots of six Site COCs for the years 1995 through 1998, and historical plots of concentration versus time.

The isoconcentration plots are drawn from annual averages of quarterly data for samples collected from monitoring wells. Hydropunch™ data, collected to guide past expansions to the network of groundwater monitoring wells, have been occasionally used in combination with well sample data to assess the extent of COC impacts. However, for this assessment, the isoconcentration plots are drawn using the well data alone. This approach is used because the purpose is to assess the success of the well monitoring program.

3.2.1 Chloroform

Isoconcentration contours shown on Figures 7 and 8 depict the chloroform distribution in HSU-1 and HSU-2 from 1995 through 1998. As described above, to provide a consistent basis for annual comparisons, these figures have been prepared from annual averages of quarterly groundwater data.

Figure 7 shows that the principal mass of chloroform within HSU-1 has been relatively stable for the last four years. Plots of chloroform concentrations within HSU-1 versus time (Figure 9) show decreasing concentrations in samples collected from UCD1-12 in the center of the HSU-1 chloroform plume, and UCD1-11 on the southern edge of the plume. Downgradient HSU-1 well UCD1-25 has slightly increasing concentrations reported in samples collected since 1995. Based on this assessment, it appears that the location of the main mass of chloroform has been established.

The groundwater IRA was initiated in May 1998 for the purpose of minimizing further downgradient and off-site migration of chloroform within HSU-2. Existing HSU-2 monitoring wells UCD2-30, UCD2-32 and UCD2-40 are currently part of the IRA monitoring program to confirm that objective. Plots of chloroform versus time in HSU-2 (Figure 9), show that chloroform concentrations have declined in samples collected from UCD2-14 on the southern edge of the HSU-2 plume. Chloroform concentrations in samples collected from UCD2-26 have been highly variable and without a clear trend.

Based on the good understanding of the VOC source area, it is concluded that the principal mass of chloroform on-site within HSU-1 and HSU-2 is adequately delineated. The existing IRA is intended to prevent further downgradient and off-site migration of chloroform within the HSU-2 capture zone, the principal HSU for migration. Further assessment of the chloroform distribution and the adequacy of the existing IRA

groundwater monitoring network within HSU-2 will be presented in the annual IRA report, which will be prepared following one year of operation of the IRA in May 1999. Off-site data with respect to the distribution of chloroform and other COCs will continue to be acquired as part of the HSU-4 investigation.

3.2.2 Tritium

The lateral distribution of tritium reported within HSU-1 appears to be limited to a relatively small area downgradient of probable source areas at the waste burial holes and the southern portion of the eastern trenches. As shown by Figure 10, the highest tritium detections within HSU-1 based on annual averages of quarterly groundwater monitoring data are reported in samples collected from well UCD1-13. Figure 10 also shows the stability of the tritium plume within HSU-1. Figure 12 contains a time versus concentration plot of tritium within UCD1-13, and demonstrates that concentrations have been decreasing significantly.

Concentrations of tritium reported in site groundwater decrease with depth into HSU-2 (Figure 11). The highest tritium concentrations in HSU-2 are consistently reported for well UCD2-14, located adjacent to UCD1-13. Concentrations of tritium within HSU-2 show seasonal fluctuations, but no long-term upward or downward trend (Figure 12).

The delineation of the principal mass of tritium within HSU-1 is complete downgradient of the source areas. Hydropunch™ data collected in 1991 show tritium impacts to the northeast between wells UCD1-12 and UCD1-11 (Figure C-3). However, more recent groundwater data from monitoring wells downgradient of this area are non-detect for tritium. No HSU-2 wells are located directly east and downgradient of UCD2-14. However, hydropunch™ data (Figure C-4) show tritium concentrations an order of magnitude lower than in UCD2-14, extending for a limited distance downgradient. Thus, the principal mass of tritium within HSU-2 is described by existing wells.

3.2.3 Carbon 14

The distribution of carbon-14 reported within HSU-1 is similar to that of tritium, but is slightly more widespread, with consistent detections in wells UCD1-23 and UCD1-12 in addition to UCD1-13 (Figure 13). Consistent carbon-14 detections reported within HSU-2 (Figure 14) are limited to UCD2-14. The occurrence of carbon-14 in site groundwater is associated with the radiological waste burial areas in the waste burial holes south of the eastern dog pens, the southern portion of the eastern trenches and the southwest disposal trenches.

As shown in Figure 15, reported concentrations of carbon-14 have declined during the period of record in the HSU-1 and HSU-2 wells where the highest concentrations have been observed.

The assessment of the completeness of delineation of the principal mass of tritium as discussed above similarly applies to carbon-14.

3.2.4 Nitrate

Nitrate is one of the most widespread of the Site COCs reported in both HSU-1 and HSU-2 groundwater (Dames & Moore, 1998a). Most groundwater samples collected from within HSU-1 contain nitrate as N reported at concentrations above background. On-site nitrate sources include all waste burial areas, with the highest HSU-1 concentrations reported for samples collected from wells downgradient of the western dog pens and the landfill units (Figure 16).

Nitrate concentrations reported within HSU-2 are significantly lower than those in HSU-1 (Figure 17). Nitrate concentrations reported in HSU-2 wells are within the same range as City of Davis water supply wells (Dames & Moore, 1999).

Reported concentrations of nitrate have been generally stable to declining on a long-term basis in samples collected from HSU-1 wells between 1995 and 1998, with the exception of wells UCD1-10 and UCD1-24, where concentrations have increased over the long term (Figure 18). Reported concentrations of nitrate have also been generally decreasing within HSU-2.

The principal mass of nitrate has been delineated within HSU-1 in the areas downgradient of the western dog pen area and LFU #2. Nitrate is also well-understood within HSU-2 in the areas downgradient of the western dog pen area, LFU #2, and LFU #3.

3.2.5 Total Dissolved Solids

Isoconcentration contours of site groundwater data for TDS within HSU-1 and HSU-2 are presented in Figures 19 and 20. Within HSU-1, TDS concentrations exceeding 1,000 mg/L are consistently reported in samples collected from wells downgradient of LFU #2, the northern portion of the Eastern Trenches, and in the vicinity of LFU #3, suggesting that HSU-1 has been impacted by these waste disposal locations similar to impacts associated with nitrate. TDS reported in HSU-2 groundwater samples only slightly exceed regional background concentrations of 500 to 600 mg/L in one well, UCD2-14.

Plots of TDS versus time for representative HSU-1 and HSU-2 wells in Figure 21 show that TDS concentrations have changed little during the period of record, with the exception of some seasonal variability in samples collected from UCD2-14.

Within HSU-1, TDS is well-delineated in the areas downgradient of LFU #2 and the northern portion of the eastern trenches. Since source areas of TDS are well understood and HSU-2 impacts are minimal, the delineation of the principal mass of TDS is considered to be complete.

3.2.6 Chromium

Isoconcentration contours for chromium reported within HSU-1 and HSU-2 are presented in Figures 22 and 23. Within HSU-1, chromium is reported at concentrations above 50 ug/L in samples collected from wells within the eastern two thirds of the Site, with the highest concentrations reported for well UCD1-28. Within HSU-2, reported chromium impacts are both lower in concentration and less widely distributed. Chromium concentrations reported within HSU-2 are below the total chromium MCL, and areas of elevated concentrations do not correspond with HSU-1 areas of elevated concentrations, notably within the vicinity of UCD1-28.

As shown in Figure 24, chromium concentrations have remained relatively constant within HSU-1. Concentrations of chromium reported in samples collected from HSU-2 monitoring wells have also remained relatively constant, with the exception of UCD2-7, where concentrations have declined significantly during the period of observation.

The distribution of chromium in site groundwater is spatially anomalous, in that, unlike other site constituents, the occurrence of chromium in groundwater does not correlate with site waste disposal areas. This suggests chromium in site groundwater is thus not necessarily a result of past waste disposal activities. The wells with relatively high reported detections of chromium are UCD1-25 and UCD1-28, which are distant from any former waste disposal activity. Though there is spatial variability in the distribution of chromium, the areas within HSU-1 groundwater of elevated chromium concentrations appear to be adequately delineated.

Because of the adequate delineation of chromium within HSU-1, together with the lack of a relationship between site waste disposal and the occurrence of chromium in site groundwater, additional delineation of the extent of chromium does not appear warranted.

3.3 Groundwater Monitoring Program Assessment Summary

During the past nine years, the water monitoring program at the Site has included the collection of over 1,000 water samples which have provided more than 100,000 analytical results. In addition, groundwater level measurements have been collected at a minimum frequency of four times per year during the same period. This extensive data set has provided sufficient information to accomplish the goals of the RI and support decisions necessary to develop an effective Remedial Action for the primary constituents of concern in Site groundwater. Specifically, the data indicate the following:

- The distribution of the principal mass of COCs within HSU-1 and HSU-2 has remained relatively stable during the last four years.
- The groundwater flow direction within both HSU-1 and HSU-2 has remained constant during the last four years, within the boundaries of defined seasonal variations.
- The distribution of the principal mass of chloroform impacts to site groundwater within HSU-1 and HSU-2 has been established. Source areas are understood, and the location of the main mass of chloroform has been stable during the period from 1995 through 1998.
- Source areas for tritium and carbon-14 are also well understood. Groundwater data collected since 1990 indicate that the groundwater impacts are localized and largely restricted to HSU-1, with lower concentrations reported in HSU-2 in the vicinity of the waste burial holes.
- The principal mass of nitrate and TDS impacts downgradient of landfill source areas are well defined, and HSU-2 impacts are minimal. Sufficient information has been collected to date by the groundwater monitoring program to support decisions necessary for evaluation of a final Remedial Action.
- Hexavalent and total chromium distribution in site groundwater is spatially anomalous, but reported concentrations are relatively constant by well location. Locations of wells with the highest reported concentrations of chromium on site do not correlate with locations of waste disposal areas, and areas of high reported concentrations of chromium in HSU-2 do not correlate with areas of high concentrations reported in HSU-1. No clear source or historical evidence of use or burial of chromium at the Site has been identified. Geological evidence correlates the occurrence of chromium and other metals in site soils with serpentine in Coast Range drainage basins. Additional delineation of chromium in site groundwater does not appear warranted.

Additional groundwater data needed to complete the RI/FS phase include further delineation of source areas within the vadose zone and an assessment of chloroform within HSU-4. Additional data needs for these media may be identified with respect to future remedial design and possible additional IRA's.

3.4 Surface Water and Storm Water Monitoring Program

This section summarizes the evolution of the surface water and stormwater monitoring program and provides an assessment of the achievement of monitoring goals. Since commencing surface water monitoring at Putah Creek in 1990, recommendations from site Remedial Project Managers (RPMs) have been incorporated into monitoring activities, resulting in the current program for both surface water and storm water runoff (Dames & Moore, 1998a).

3.4.1 Evolution of Surface Water and Storm Water Monitoring Program

Surface water monitoring at the Site was initiated in Fall 1990, coinciding with quarterly groundwater monitoring activities conducted as part of the Phase II Site Characterization (Dames & Moore, 1993). Surface water monitoring commenced at the Site to identify potential impacts from the Site and surrounding areas on the South Fork of Putah Creek and the influence from the South Fork of Putah Creek to groundwater elevations on-site. Surface water monitoring was conducted quarterly beginning in November 1990 and continued through 1998. Storm water monitoring was initiated to establish the presence of site constituents in storm water runoff.

Figure 25 shows the locations of the surface water and storm water sampling points monitored at the Site. Locations for surface water monitoring included PCU (Putah Creek Upstream); PCD (Putah Creek Downstream); and STPO. STPO is located upstream of the Site at the outfall from the UC Davis wastewater treatment plant between PCU and PCD. In 1994, the Water Monitoring Plan (PNNL, 1994b) included storm water monitoring at two locations; the lift station (LS-1) and a storm drain (SD-1). Both the lift station and storm drain runoff points are located in the western portion of the Site, south of the former Strontium-90 Imhoff Tanks and west of the former Western Dog Pen area (Figure 25).

In 1996, an analysis of historical data for the three sampling locations along Putah Creek resulted in changes to the monitoring program for surface water and storm water monitoring. Storm water discharge points affiliated with the LFU #1 and LFU #3 areas on the Site were identified and added to the sampling program beginning with Fall 1996. Monitoring of the storm drain (SD-1) was stopped at this time, since it was determined that LS-1 was a better location to monitor runoff before it left the Site. At the request of site RPMs, the analytical program was amended to include analyses for hardness, cations and anions, alkalinity, total organic carbon, and aquatic toxicity. Most radiological parameters were eliminated from surface water locations PCU and STPO, as were semivolatiles from all three surface water monitoring locations, after historical monitoring results yielded no significant detections of these constituents.

In Fall 1998, the schedule for surface water monitoring was changed to coincide with the storm water monitoring during two separate occurrences of seasonal rainfall, as described in the Revised FSP (Dames & Moore, 1998a). As requested by site RPMs, the Revised FSP also identified a second "mixing zone" sampling point for surface water (PC2) to evaluate potential aquatic toxicity occurring approximately two miles downstream of location PCD.

UC Davis has continued to report the monitoring data for LS-1 as part of the ongoing water monitoring program, although responsibility for the collection and analysis of storm water from location LS-1 has been assumed by DOE since 1994. The Draft Storm Water Sampling Plan (Weiss, 1998) outlines procedures for investigating the source and extent of contaminants potentially present in storm water in the western region of the Site (DOE areas), and addresses storm water runoff at LS-1.

3.4.2 Assessment of Surface and Storm Water Monitoring Program

The current surface water and storm water monitoring program addresses Putah Creek water quality issues for the entire LEHR Site. However, in June of 1997, the DOE and UC Davis agreed to a division of responsibility with regard to site restoration as presented in the Memorandum of Agreement (MOA; UCDavis, 1997). As stated in the MOA, UC Davis is responsible for monitoring activities for UC Davis disposal areas referred to as the South Campus Disposal Site (Figure 2). For storm water, these areas of responsibility are depicted on Figure 25. This assessment of surface and storm water monitoring is based on the work conducted in association with UC Davis disposal areas.

Six separate zones have been established for storm water runoff at the LEHR Site and published in the Revised FSP (Dames & Moore, 1998a). These six zones have been defined depending on the flow path of the runoff and include three distinct DOE areas and three distinct UC Davis areas (Figure 25). For UC Davis, these storm water zones are located at the southeast corner of the Site at LFU #3, another in the eastern portion of LFU #1, and a third major storm water zone consisting of three large areas in the central portion of the Site. Storm water zones located at LFU #1 and LFU #3 have direct runoff points to Putah Creek. In the third major storm water zone, accumulated rainfall ponds and infiltrates at the surface.

Data collected in 1996 through 1998 from storm water runoff locations LFU #1 and LFU #3 on the Site do not indicate that associated chemical releases to Putah Creek are occurring (Table 3). In addition, no acute toxicity effects have been identified. Surface water results reported in the last several years have not indicated impacts from the Site.

Most detections reported in the downstream location are equivalent or lower than concentrations reported at upstream locations. The historical data also show reported concentrations in the downstream location can be correlated to existing creek conditions or releases at STPO. Figure 26 shows compounds consistently detected in PCD in comparison to detections in PCU and STPO.

Investigations for the presence of toxic substances in wildlife, including fish, has been conducted by various agencies for the last 10 years in waters associated with Putah Creek. These studies provide bioaccumulation data for fish and wildlife in waters both upstream and adjacent to the Site. A 1991 report issued by the California Department of Fish and Game suggests levels greater than 20 parts per million of organochlorine pesticides and mercury in wildlife at Lake Berryessa, California (E.E. Littrell, 1991). Lake Berryessa represents the headwaters for Putah Creek. More recently, the Agency for Toxic Substances and Disease Registry (ATSDR) conducted studies in fish in the South Fork Putah Creek near the LEHR/SCDS site which address both public health and bioaccumulation affects (ATSDR, 1998). These studies concluded that concentrations of lead and mercury in certain fish species were elevated, but there was no apparent correlation between the location and lead or mercury levels. Radiological analysis of fish by ATSDR indicated that no radionuclides in the fish pose a public health hazard, and that concentrations found downstream of the Site were not significantly different than those determined for the two upstream locations. Based on these findings, no independent action by UC Davis is warranted unless further health consultation reports or site releases indicate a connection with the South Campus Disposal Site.

The extensive data set for surface water monitoring has provided a clear understanding of the quality of water in the South Fork of Putah Creek near the Site. Specifically, the data indicate the following:

- Constituents reported consistently in the surface water adjacent to the Site cannot be attributed to influences caused by Site activities.
- Sporadically reported constituents could not be confirmed for surface water.
- Two locations exist for storm water runoff from the SCDS.
- Storm events occasionally do not generate enough volume for the current suite of chemical parameters.

4.0 PROPOSED GROUNDWATER, SURFACE WATER AND STORMWATER MONITORING PROGRAMS

This section presents the proposed revised water monitoring program. Revisions to the program are based on the assessment of the groundwater, surface water and storm water monitoring programs presented in Section 3.

4.1 PROPOSED GROUNDWATER MONITORING PROGRAM

The following sections present the rationale for changes to the groundwater monitoring program, and describe the proposed groundwater monitoring network, parameters and schedule. Based on the assessment of the current groundwater monitoring program, continued groundwater monitoring should be based primarily on the existing IRA groundwater monitoring program, which substantially duplicates the current quarterly program, supplemented with additions based on needs of the ongoing HSU-4 investigation.

4.1.1 Rationale for Changes to the Groundwater Monitoring Program

In nine years of groundwater monitoring, sufficient information has been collected to accomplish the goals of the Remedial Investigation and support the decisions necessary to develop effective remedial actions. Impacts to groundwater in the vicinity of the Site are clearly defined for VOCs in terms of magnitude and distribution within HSU-1 and HSU-2. Continued monitoring of the system of wells designed to evaluate the effectiveness of the groundwater treatment system will be accomplished to meet requirements defined by the RPMs and to address any changes identified within the groundwater chemistry.

For the radiological COCs, tritium and carbon-14, the site source areas are well-defined. Sufficient information has been collected through groundwater monitoring and hydropunch to determine that the groundwater impacts are localized and primarily present in HSU-1, although lower levels are also seen in HSU-1 in the vicinity of the waste burial holes. Currently planned and recently completed remedial actions in the southwest corner and the Waste Burial Holes are expected to reduce impacts to groundwater. Final remediation will be designed to further reduce impacts to the groundwater from the waste Burial Hole area, and an appropriate groundwater monitoring program will be incorporated within the final Remedial Action.

Although nitrate and TDS impacts are clearly seen in HSU-1 immediately downgradient of landfill areas, these site source areas are also clearly defined, well understood, and HSU-2 impacts are minimal. Sufficient information has already been collected through the groundwater monitoring program to support decisions necessary for the

development of a final remedial Action. The final remedial Action for the Site will address the source areas for these COCs and an appropriate groundwater monitoring program will be incorporated.

Hexavalent and total chromium distribution in site groundwater is spatially anomalous, but relatively constant by well location. However, locations of wells with highest concentrations on site do not indicate a relationship to site waste disposal areas. Impacts are seen primarily in HSU-1 and areas of highest concentration in this HSU do not correlate to higher concentrations in HSU-2. No clear source or historical evidence of use or burial at the Site has been identified, although geological evidence indicates regional historical deposition of chromium and other metals associated with serpentine in site and local soils. Additional delineation of chromium in site groundwater does not appear warranted.

As described above, the extent of the principal mass of COCs has been assessed, and the relative stability of the impacts has been established. Therefore, it is appropriate at this time to modify the program to make it consistent with changing needs and objectives as the emphasis of the site program shifts from Remedial Investigation to Remedial Design and Remedial Action. These modifications are as follows:

1. Limit monitoring within HSU-1 to that necessary to assess the influence of extraction in HSU-2.
2. Identify potential unexpected changes in the distribution of COCs within HSU-1 and HSU-2 prior to and during the Remedial Design.
3. Identify potential unexpected changes in the groundwater gradient and flow direction, including effects of the groundwater IRA.
4. Assess the effectiveness of the groundwater IRA.
5. Assess HSU-4 groundwater impacts.

These objectives will be reviewed on an annual basis and upon implementation of future site remedial actions.

In planning modifications to the groundwater monitoring program, it is recognized that the water monitoring program currently in place was designed to assess the extent of groundwater impacts resulting from previous operations at this Site. Following this rationale, many of the wells are placed in areas of low to non-detectable concentrations of COCs. Since the principal need of groundwater monitoring at this time is to identify unexpected changes in the distribution of COCs, monitoring well locations which

address the principal COC mass are essential. This effort will focus on HSU-2 wells since migration of Site COCs occurs principally within HSU-2. The table below lists those wells in HSU-2 for each of the six COCs.

Essential Wells to Monitor Principal COC Mass

COC	Monitoring Wells
Chloroform	UCD2-26, UCD2-29, UCD2-30, UCD2-31, UCD2-32 and UCD2-40
Tritium	UCD2-14, UCD2-35 and UCD2-39
Carbon-14	UCD2-14, UCD2-35 and UCD2-39
Nitrate	UCD2-7, UCD2-14, UCD2-29, UCD2-30, UCD2-32 and UCD2-40
TDS	UCD2-7, UCD2-14, UCD2-16, UCD2-29, UCD2-30, UCD2-32 and UCD2-40
Chromium	UCD2-7, UCD2-14, UCD2-16, UCD2-32 and UCD2-40

The existing IRA groundwater monitoring program incorporates all of the essential wells listed in the table above. Therefore, during the transition phase of the project from the Remedial Investigation to the Remedial Design and Remedial Action phase, it is recommended that continued groundwater monitoring consist of the IRA groundwater monitoring program, supplemented with additional monitoring as required to meet the needs and objectives listed above. These additional monitoring requirements, and a summary of the existing IRA program, are presented in the following sections.

4.1.1.1 Groundwater Monitoring Network

Under the proposed program, groundwater level measurements would be collected from the network of 42 wells listed in Table 4. The locations of these wells are shown in Figure 5. Wells to be sampled in the recommended groundwater monitoring program are shown in Figure 27. These wells are also listed in Table 5 and include the 17 wells currently in the IRA monitoring program. The IRA monitoring program is specified by CVRWQCB WDR No. 97-223 (CVRWQCB, 1997). In addition, three HSU-4 wells will be monitored.

4.1.1.2 Groundwater Monitoring Schedule

Table 5 presents the sampling locations, parameters and schedule for the proposed groundwater monitoring program. In accordance with the WDRs for the Groundwater IRA, sampling will continue on the schedule specified during the first year of operation of the IRA. This schedule requires monthly sampling of IRA wells UCD1-28, UCD2-29, UCD2-30, UCD2-31, UCD2-35, UCD2-36, UCD2-37, UCD2-38, UCD2-39 and UCD2-40 and quarterly sampling of UCD2-7, UCD2-14, UCD2-15, UCD2-16, UCD2-17, UCD2-26

and UCD2-32. At the completion of one year of operation in May 1999, it is recommended that monitoring continue on a quarterly basis as shown in Table 5, in February, May, August and November. However, this schedule is subject to confirmation based on the results of the assessment which will be presented by the IRA system evaluation report described above.

4.1.1.3 Groundwater Sampling Analysis

The Site COCs in HSU-1 and HSU-2 have been well established through the groundwater analytical data collected during the RI/FS phase of groundwater investigation and monitoring, as described above in Section 3.1.2. On the basis of these established COCs, continued groundwater monitoring will focus on the following analytes:

- Chloroform (as part of total VOCs)
- Tritium
- Carbon-14
- Nitrate
- Total Dissolved Solids
- Total (all valent states) Dissolved Chromium

Total dissolved chromium (and not hexavalent chromium) is proposed because all chromium in Site groundwater may be assumed to be hexavalent chromium (Cr VI). Reduced chromium (Cr III) is virtually insoluble within the pH range of 6 to 8, which matches the pH range of Site groundwater (Dames & Moore, 1999a). This assumption is conservative, since Cr III is considered non-toxic while Cr VI is considered a human carcinogen. Recent data support this assumption, as results for total chromium and hexavalent chromium typically compare within the accepted range of relative percent difference for duplicate analyses.

As shown in Table 5, samples from wells which are part of the HSU-4 RI/FS investigation will be analyzed for the COCs chloroform (as part of the total VOCs), tritium, carbon-14, nitrate, TDS, and chromium. Field parameters collected during each sampling round will continue to include pH, oxidation/reduction potential, turbidity, electrical conductivity and temperature for all wells.

This schedule and parameter list will be reviewed annually, and recommendations for revisions to the groundwater monitoring program will be incorporated into future annual water monitoring reports. Data review will include evaluation of changes in concentrations over time, including comparison with historical data. Revisions would be

recommended if increases in concentrations are observed. In addition, if removal or remedial actions are implemented, the actions' affect on groundwater would be evaluated, and the monitoring schedule and/or constituent list would be revised accordingly.

4.1.2 Data Quality Objectives

It is intended that data collected through implementation of this groundwater monitoring program will satisfy data quality requirements specified in the Revised QAPjP (Dames & Moore, 1998d). These groundwater data will be used to characterize the nature and extent of contamination in HSU-4, in particular, support the human health and ecological risk assessment, support the evaluation of the IRA effectiveness, and assist in the development and evaluation of future remedial alternatives. Quality assurance objectives (QAOs) have been established to assess the quality of the measurement data to serve its intended purpose in support of the project objectives. These QAOs are described in the Revised QAPjP.

Rigorous validation procedures, derived from the USEPA National Functional Guidelines for Organic and Inorganic Data Review (USEPA, 1990), have been used to evaluate data for the groundwater monitoring program. Data validation is performed on all analytical results received from the laboratory. The purpose of data validation is to identify data that do not meet the QAOs. The criteria for assessing QAOs are based on documented analytical performance and expected confidence levels appropriate for use of the data.

The proposed changes to the groundwater monitoring program warrant appropriate modification to data validation procedures. Confidence in analytical results can be established by comparison of new results with the well-characterized, historical groundwater data for HSU-1 and HSU-2, as well as an assessment of data quality objectives. A successful data validation program incorporates both of these evaluation methods. Limited data validation procedures, based on a subset of the National Functional Guidelines, is adequate when used in conjunction with historical groundwater data because significant changes from past data can be identified. The proposed validation program for the groundwater monitoring includes an assessment of holding times, method blank performance, precision of duplicate measurements, accuracy of analytical performance, and matrix-specific biases. The SOPs utilized to perform this level of data validation are provided in the Revised QAPjP. This level of review provides appropriate evaluation of the data QAOs, without compromising the quality assurance procedures outlined in the Revised QAPjP. Should problems be noted during the review, a more rigorous evaluation of laboratory "raw data" would be initiated

immediately. Data reports submitted by the laboratory will be consistent with EPA Level IV reporting criteria (USEPA, 1990) and include the necessary documentation for a complete evaluation of laboratory results. Since the characterization of HSU-4 remains consistent, data validation procedures will not be modified for HSU-4.

4.2 Proposed Surface Water and Storm Water Monitoring Program

As demonstrated in the Phase II Site Characterization Report (Dames & Moore, 1993), Putah Creek is not recharged through groundwater. Therefore, the potential pathway for site influence to Putah Creek is seasonal storm water runoff. Additional storm water data are needed to determine if storm water runoff from the Site is having an adverse affect on the water quality in the South Fork of Putah Creek. It is proposed that monitoring of surface and storm water continue as part of the water monitoring program to establish a single comprehensive monitoring program for the SCDS. As requested by site RPMs, the evaluation of site influences to surface water includes aquatic toxicity testing, as well as chemical testing of storm water runoff. Previously, the program focused on chronic toxicity at specific locations in Putah Creek and acute toxicity effects related to storm water runoff. Future data needs include chronic toxicity evaluation to determine if mitigating affects on aquatic life are occurring. The proposed program for surface water and storm water monitoring focuses on addressing the presence of storm water constituents in seasonal runoff and providing information to evaluate chronic toxicity caused by the runoff of storm water from the Site. The monitoring of chemical parameters presented in the Table 6 will be continued for another year as part of the IRA monitoring program to further supplement the data set for storm water runoff.

It is proposed that sampling of storm water runoff continue through 1999 as part of the proposed water monitoring program to further evaluate if chemical releases (detections above background) are occurring and to address chronic toxicity effects from site runoff to Putah Creek, as requested by site RPMs. Continued monitoring of seasonal storm water will address both surface water and storm water objectives for the Site. The objectives of the proposed storm water/surface water program are to monitor storm water runoff to Putah Creek from the SCDS and assess the presence of storm water constituents that could be present in runoff from the SCDS. Continued monitoring after 1999 will be addressed in the 1999 Annual Monitoring Report. This evaluation will account for ongoing remedial actions and any additional engineering controls at the Site.

As discussed above, storm water is the only pathway for the SCDS to impact Putah Creek. As such, we propose that storm water monitoring continue twice a year, at two separate rainfall events, once at the beginning of the rainy season and once near the end of the season, as described in the Revised FSP. Storm water will be sampled at

two locations, LFU #1 and LFU #3, to assess potential impacts to Putah Creek from site runoff. The analytical program for storm water will include both chemical specific testing and aquatic toxicity evaluations. Proposed chemical parameters for the storm water monitoring program are presented in Table 6. The proposed chronic aquatic toxicity testing will be conducted using these aquatic species: fathead minnow (*Pimephales promelas*), water flea (*Ceriodaphnia dubia*), and green algae (*Selenastrum carpicornutum*). Using upstream water collected from Putah Creek (location PCU) as the background control will best determine the additive or mitigating effects of the Site runoff on the receiving water. Testing of surface water will be conducted only if a chemical release through site runoff is identified, or aquatic toxicity testing indicates potential harmful affects on freshwater life.

Based on previous sampling events, storm water events will not necessarily produce enough runoff to evaluate all of the constituents of concern. Should this situation occur, field staff will collect enough runoff water to conduct the chronic toxicity analyses. Aliquots may also be collected for chemical analyses if sufficient volume is available. UC Davis will request only those analyses for which enough volume can be collected. The hierarchy for selection of chemical analyses will be based on previous chemical results for the respective location.

4.2.1 Sampling Locations

Sampling locations for surface water and storm water have included areas that are not influenced by the South Campus Disposal Site. These unrelated monitoring locations include STPO for surface water and the lift station for storm water. Site runoff locations influenced by DOE areas on the LEHR Site, including the lift station runoff point (LS-1), have been addressed in a separate monitoring and reporting plan (Weiss, 1998). The WWTP, affiliated with surface water monitoring point STPO, operates under the NPDES program regulated by the RWQCB. The proposed surface water and storm water monitoring program eliminates these sampling locations and focuses solely on sample locations affiliated with the SCDS.

Sampling of storm water runoff will continue to be conducted twice annually during the rainy season. The proposed storm water monitoring program will include sampling at two locations where runoff enters Putah Creek. Storm water will be collected from a drainpipe located south of the "X" building area (LFU #1) to monitor storm water that runs off the eastern portion of the Landfill Unit No. 1 area. Storm water will also be collected at the north end of the spill pipe that transports runoff from the main north-south trending drainage ditch to Putah Creek (LFU #3). This point will monitor runoff

from Landfill Unit No. 3 and the surrounding area. Flow measurements for runoff will be recorded as described in the Revised FSP (Dames & Moore, 1998a).

Should a chemical impact be determined based on comparison of analytical data for a particular sampling location to corresponding background concentrations (described below), a new sample will be collected during the next attainable storm event and analyzed for the constituent in question. At the same time the storm water runoff location is resampled, samples will also be collected from surface water locations PCU, PCD and PC2. The additional surface water data will be used to evaluate the presence of the particular constituent in Putah Creek. Chronic toxicity results will be used to determine if runoff has the potential to cause adverse effects on aquatic species.

4.2.2 Primary Constituents for Site Runoff

Parameters monitored in storm water runoff were presented in the Revised FSP. The monitoring program was designed to address storm water constituents for the areas where runoff is occurring. The analytical program for storm water includes both chemical specific testing and aquatic toxicity evaluations. Chemical testing of storm water has provided evaluation of the presence of storm water constituents in site runoff. Aquatic toxicity testing evaluated acute toxicity effects from storm water runoff on fathead minnow species (*Pimephales promelas*).

Chemical and aquatic toxicity testing results for seasonal runoff in 1997 and 1998 indicate that no releases of site COCs have occurred in LFU #1 or LFU #3, and no acute toxicity effects have been demonstrated for storm water runoff. The proposed monitoring program focuses on evaluating whether storm water constituents are present in runoff at levels above background in Putah Creek and whether chronic toxicity impacts to aquatic life are caused by the discharge of storm water from the SCDS. Background concentrations of storm water constituents in Putah Creek will be calculated based on the data collected at both PCU and STPO locations over the last eight years using statistical methods presented in the 1994 Annual Water Monitoring Report (PNNL, 1995). Seasonal variations and flow measurements for Putah Creek will be considered in the determination of background concentrations. Impacts to Putah Creek from storm water constituents will be assessed based on the calculated background levels.

The process shown in Figure 28 will be used to select the appropriate statistical method to evaluate each chemical parameter. This process uses an initial survey of the percentage of detected and non-detected values for the selected parameters. The selection of statistical methods to be used includes the following: calculation of an upper tolerance limit (UTL) with 95% confidence; adjustment of sample mean and standard

deviation by Cohen's Method and calculation of an UTL; a test of proportions evaluation; or no statistical analysis.

Previous aquatic toxicity methods have focused on single species testing for storm water, and multi-species testing for surface water. The proposed monitoring program will obtain additional information on aquatic toxicity using chronic toxicity methods for the evaluation of storm water. Continued evaluation of surface water on a quarterly basis is not necessary since the objective of the monitoring is to determine if storm water runoff is contributing to toxicity in the creek. To establish whether there is an additive effect, dilution water from surface water location PCU will be used for testing. The dilution water will also be tested as a control to determine if background toxicity is present. Based on the results of the chronic toxicity analyses, respective toxicity units can be calculated for each storm water runoff location. The results can be used to determine if runoff from the SCDS is causing adverse affects on Putah Creek.

The proposed monitoring parameters for the storm water runoff do not differ greatly than those presented in the Revised FSP (Dames & Moore, 1998a). Modifications to the program include replacing acute toxicity with chronic toxicity testing and eliminating hexavalent chromium analyses (Table 6). The rationale for replacing acute toxicity analyses with chronic toxicity testing has been discussed above. The basis for eliminating hexavalent chromium analysis in favor of total chromium analyses was presented in Section 3.1.2. The monitoring parameters established for storm water runoff were designed to evaluate the presence of COCs in storm water runoff for the two landfill areas. The need for additional chemical testing to address removal actions or other invasive activities on the Site will be addressed in future work plans. As determined by the collection of adequate sample volume from site runoff, a subset of the proposed parameters may be selected as discussed above in Section 4.2.

4.2.3 Aquatic Toxicity Evaluations

The purpose of evaluating aquatic toxicity is to determine if site runoff is contributing to an increase in toxicity to Putah Creek during storm water discharges. The proposed storm water monitoring program includes chronic toxicity testing of site runoff. The approved chronic methods are detailed in EPA/600/4-91/002 (US EPA, 1994) for freshwater bodies. These approved methods specify the type of aquatic species to be used for testing, whether the test is to be conducted as static non-renewal or as static renewal and an appropriate dilution sequence. To account for background toxicity, PCU will be used as dilution water for the chronic toxicity analyses. Control samples will also be prepared using surface water collected from location PCU to provide comparative data.

The toxicity of each sample will be determined in accordance with EPA guidelines (USEPA, 1994) by calculating the effective concentration that produces a 25% effect of the test endpoint (EC25) for each of the test species. The EC25 values will be used to calculate toxicity units (TU; $100/EC25$) for each sample so that storm water and surface water samples can be compared to assess significant increases in toxicity. If, after conducting two rounds of sampling and analysis, there is an indication of a significant increase in toxicity to Putah Creek, an additional sample will be collected from the suspect location(s). The additional sample will be used to confirm toxicity of the particular location and to determine if a Toxicity Identification Evaluation (TIE) should be started. If started, the TIE will be conducted in three phases in accordance with *Methods for Aquatic Toxicity Identification Evaluations* (US EPA, 1991). The first phase will involve testing to identify the class of compounds that is causing toxicity. The second phase will consist of identifying individual constituents. The third phase will consist of assessing and confirming the causative agent of the toxicity. Based on the results of the TIE, recommendations may be made to evaluate and implement site-specific controls to reduce the toxicity.

5.0 DATA REPORTING

Water monitoring data will be reported in accordance with the requirements of the IRA Monitoring and Reporting Program, which is specified in the WDR. As provided by the WDR, modifications to that program should be considered following 12 months of operation of the full scale IRA, which will occur in May of 1999. This report will further assess the adequacy of the IRA monitoring program and make recommendations regarding modifications, if necessary. Therefore, the recommendations presented here are provisional.

Groundwater monitoring data should be transmitted to the CVRWQCB on a quarterly basis. Quarterly data transmittals will be prepared for submittal within 45 days of the conclusion each quarter. These reports will include a groundwater contour map, discussion of the status of any ongoing investigation and remediation projects that affect the water monitoring program, and influent, effluent and groundwater quality data in tabular form. A tabulation of depth to groundwater will be included, together with a summary of field methods and a summary of QA/QC procedures as described in the Revised QAPjP (Dames & Moore, 1998d).

An annual report will present more detailed analysis of the monitoring results and evaluation of the results of the IRA. Trends or changes in the distribution of the principal mass of COCs will be identified. The annual report will include isoconcentration contour maps of the COCs, water level contour maps and an assessment of the IRA capture zone and effectiveness of remediation. It is anticipated that the annual report will be prepared after the fourth quarter monitoring round, and will include the fourth quarter data transmittal together with storm water runoff data from the previous rainy season. The annual report will provide a comparison of storm water monitoring results to background conditions established for Putah Creek just upstream of the Site and an assessment of continued storm water monitoring based on cumulative results since the onset of the program in 1996. The annual report will be submitted to site to the RPMs by April 1 of the following year.

As stated above, this reporting schedule is provisional and subject to revision based upon the recommendations to be provided in the IRA system evaluation report to be prepared following May 1999.

6.0 REFERENCES

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Table 1
Summary of Well Construction Details
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration

Davis, California								Elevation Top of Well Cover (ft msl)	Elevation Ground Surface (ft msl)
Well Number	Date Installed	Total Boring Depth (ft bgs)	PVC Well Diameter (inches)	Screen Interval (ft bgs)	Filter Pack (ft bgs)	Bentonite (ft bgs)	Cement (ft bgs)		
UCD1-1	10/09/87	56.5	2	46.5-56.5	41-56.5	38-41	0-38	50.05	47.9
UCD1-2	Abandoned								
UCD1-3	10/23/87	51.5	2	39-49	34-51.5	(a)	0-34	50.05	48.2
UCD1-4	10/14/87	56.5	2	45-55	40-56.5	(a) 37-40	0-37	51.69	49.4
UCD1-5	10/22/87	48.5	2	38-48	33-48	(a)	0-33	48.44	48.4
UCD1-6	10/21/87	52.5	2	40-50	35-50	(a)	0-35	50.94	49.0
UCD2-7	11/05/87	90	2	80-90	75-90	(a)	0-75	51.65	49.3
UCD1-8	11/03/87	56	2	43.5-53.5	39-53.5	(a)	0-39	51.51	49.2
UCD1-9	11/04/87	51.5	2	40-50	35-50	(a)	0-35	51.38	49.0
UCD1-10	10/11/89	70	4	54-69	52-70	49-52	0-49	49.87	47.4
UCD1-11	10/17/89	66.5	4	50-65	47-66.5	44-47	0-44	50.67	47.6
UCD1-12	10/19/89	65	4	49.5-64.5	47-65	44-47	0-44	51.76	48.8
UCD1-13	10/26/89	65	4	50-65	47-65	44.5-47	0-44.5	52.19	49.2
UCD2-14	11/15/89	86	4	75-85	69-86	64-69	0-64	51.72	49.0
UCD2-15	03/28/90	120.5	4*	91-116	86-120.5	65-86	0-65	51.49	49.4
UCD2-16	04/04/90	122	4*	92-117	86-122	71-86	0-71	49.95	48.2
UCD2-17	04/10/90	143	4*	88-113	81-113	78-81	0-78	51.83	49.6
UCD1-18	10/04/90	70	4*	54-69	51-70	48-51	0-48	48.56	46.7
UCD1-19	10/01/90	74.5	4*	56.5-71.5	53.5-72.5	50.5- 53.5	0-50.5	51.33	49.3
UCD1-20	10/09/90	73.5	4*	57-72	54-73.5	51-54	0-51	49.78	48.0
UCD1-21	10/11/90	73.5	4*	57-72	54-73.5	51-54	0-51	48.77	48.7
UCD1-22	10/25/90	73	4*	57-72	54-73	51-54	0-51	49.07	49.0
UCD1-23	10/17/90	76.5	4*	56.5-71.5	53.5-73	50.5- 53.5	0-50.5	49.39	49.2
UCD1-24	10/22/90	73	4*	57-72	54-73	51-54	0-51	48.91	48.8
UCD1-25	10/06/95	75	4**	60-75	56.9-75	52-56.9	0.52	48.80	-
UCD2-26	10/06/95	102	4**	87-102	84-102	79-84	0-79	48.79	-
UCD2-27Z1	10/06/95	136	5**	53-55	51.5-57.5	49-51.5	0-49	47.79	-
UCD2-27Z2	10/06/95	136	5**	63-65	61.5-66.5	57.5-61.5	0-49	47.79	-
UCD2-27Z3	10/06/95	136	5**	73-75	71.5-76.5	66.5-71.5	0-49	47.79	-
UCD2-27Z4	10/06/95	136	5**	86-88	84.9-90	76.5-84.9	0-49	47.79	-
UCD2-27Z5	10/06/95	136	5**	96-98	94.5-100	90-94.5	0-49	47.79	-
UCD2-27Z6	10/06/95	136	5**	106-108	104.5-109.5	100-104.5	0-49	47.79	-
UCD2-27Z7	10/06/95	136	5**	116-118	114.5-119	109.5-114.5	0-49	47.79	-
UCD1-28	09/05/96	70	2*	53-68	51-70	47-51	0-47	50.34	48.1
UCD2-29	09/04/96	97	2*	80-95	76.7-97	72-76.7	0-72	50.32	48.1
UCD2-30	09/10/96	110	2*	95-110	91-110	89.5-91	0-89.5	49.83	47.6
UCD2-31	09/11/96	110	2*	94-109	91-110	87-91	0-87	49.86	47.5
UCD2-32	04/03/97	105	2*	83-103	81 -105	77-81	0-77	45.41	45.08
UCD4-33	Abandoned in May 1997 and replaced by UCD4-42								
UCD1-34	10/06/95	80	4**	61-76	57-76	50-57	0-50	55.70	-
UCD2-35	10/06/95	130	4**	107-122	103-122	98-103	0-98	55.71	-
UCD2-36	11/06/97	105	2*	82-102	79-105	73-79	0-73	48.31	-
UCD2-37	10/20/97	118.5	2*	94-114	91-118.5	85-91	0.85	49.63	-

Table 1
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LEHR/SCDS Environmental Restoration

Davis, California								Elevation Top of Well Cover (ft msl)	Elevation Ground Surface (ft msl)
Well Number	Date Installed	Total Boring Depth (ft bgs)	PVC Well Diameter (inches)	Screen Interval (ft bgs)	Filter Pack (ft bgs)	Bentonite (ft bgs)	Cement (ft bgs)		
UCD2-38	10/23/97	119	2*	95-115	89-95	83-89	0-83	57.20	-
UCD2-39	10/30/97	112	2*	87-107	84-112	80.5-84	0-81.5	49.63	47.4
UCD2-40	11/07/97	108.5	2*	86-106	83-108.5	78-83	0-78	48.98	46.5
UCD4-41	10/10/97	295	4*	257-277	255.5-280	248.5-253	0-248.5	49.37	47.0
UCD4-42	11/03/97	272	4*	248.5- 268.5	245-269	240-246	0-246	47.22	47.0
UCD4-43	10/02/97	295	4*	248-268	242.5-274	233-242.5	0-237	45.06	44.52
EW2-1	09/20/96	125.65	8*	79.4- 119.4	74.4- 125.65	68.4- 74.4	0-68.4	49.17	47.3
IW2-1	10/17/97	126.5	10*	84.5- 119.5	80-126.5	75-80	0-75	49.39	-

Note: ft bgs feet below ground surface.
ft msl feet mean sea level datum.
* stainless steel, wire wrap screen.
** stainless steel, blank casing and wire wrap screen.
(a) Well constructed with #60 sand seal and no bentonite.

Table 2
Current Groundwater Monitoring Parameters and Schedule
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Analyte/Analysis																
	Radiological Analytes																Alkalinity
	Gamma(d)	Tritium(d)	C-14(d)	Sr-90(d)	Ra-226(d)	Pu-241	Am-241	Gross beta(d)	Gross alpha(d)	VOCs(b)(d)	SVOCs(c)	Metals(d)	Nitrate(d)	Chromium (hexavalent)(d)	TOC, TDS	Pesticides & PCBs	Cations, Anions
UCD1-18	A	A	A	*	*	*	*	A	A	A	A	A	S	S	A	A	*
UCD1-1	*	*	*	*	*	*	*	*	*	*	*	*	A	A	*	*	*
UCD1-4	Q	Q	*	Q	Q	*	*	Q	Q	Q	A	A	Q	Q	Q	Q	*
UCD1-10	A	A	*	*	*	*	*	A	A	Q	A	A	Q	Q	Q	A	*
UCD1-11	A	A	*	*	*	*	*	A	A	A	*	A	S	S	A	A	*
UCD1-12	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	A	Q	Q	Q	Q	*
UCD1-13	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	A	A	Q	Q	Q	*
UCD1-19	A	A	*	*	*	*	*	A	A	A	*	A	A	A	Q	A	*
UCD1-20	S	S	S	S	S	*	*	S	S	A	A	A	A	S	A	A	*
UCD1-21	A	A	A	A	A	A	A	A	A	A	*	A	A	A	A	*	*
UCD1-22	S	S	*	S	S	S	S	S	S	*	*	*	*	*	S	*	*
UCD1-23	S	S	S	S	S	*	*	S	S	A	*	A	A	A	A	*	*
UCD1-24	A	A	A	A	A	*	*	A	A	A	*	A	A	A	A	A	*
UCD1-25	A	Q	Q	A	A	*	*	A	A	Q	A	A	Q	Q	A	A	*
UCD1-28(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD1-34	A	S	A	A	A	*	*	A	A	S	A	A	S	S	A	A	*
UCD1-27Z3	*	A	A	*	*	*	*	*	*	A	*	*	A	A	*	*	*

Table 2
Current Groundwater Monitoring Parameters and Schedule
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Analyte/Analysis															
	Radiological Analytes								VOCs(b)(d)	SVOCs(c)	Metals(d)	Nitrate(d)	Chromium (hexavalent)(d)	TOC, TDS	Pesticides & PCBs	Alkalinity Cations, Anions
	Gamma(d)	Tritium(d)	C-14(d)	Sr-90(d)	Ra-226(d)	Pu-241	Am-241	Gross beta(d)	Gross alpha(d)							
UCD2-17	A	A	A	*	*	*	*	A	A	A	A	S	S	A	A	*
UCD2-7	S	S	S	S	S	*	*	S	S	A	*	S	S	A	A	*
UCD2-14	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	Q	Q	Q	Q	*
UCD2-15	Q	Q	*	Q	Q	*	*	Q	Q	Q	A	Q	Q	Q	Q	*
UCD2-16	S	S	*	S	S	*	*	S	S	S	*	Q	Q	Q	*	*
UCD2-29(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-30(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-31(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-32	Q	Q	Q	Q	Q	*	*	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-35(e)	A	Q	Q	A	A	*	*	A	A	S	A	Q	Q	Q	A	*
UCD2-36(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-37(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-38(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-39(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-40(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-26	A	Q	Q	A	A	*	*	A	A	Q	A	Q	Q	Q	A	*
UCD2-27Z5	*	A	A	*	*	*	*	*	*	A	*	A	A	*	*	*
UCD4-41	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD4-42	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD4-43	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

A = annual sampling (February); S = semi-annual sampling (February and August); Q = quarterly sampling (Feb., May, Aug., and Nov.); * = sample not analyzed for constituent

(a) At each sampling event, samples are analyzed for pH, Eh, electrical conductivity, temperature, and turbidity in the field; water levels are measured before each sampling event.

(b) Volatile organic compounds.

(c) Semivolatile organic compounds.

(d) As applicable, equipment blanks are collected at a minimum frequency of ten percent for the same parameters as the associated samples.

(e) Well is also sampled monthly as part of the IRA monitoring.

TABLE 3
NUMBER OF DETECTIONS, POSITIVE AND MAXIMUM VALUES IN STORM WATER
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Parameter Class			Analyte			STORM WATER LOCATIONS			
						Number of Results	Number of Detections	Maximum Value	Date of Maximum Value
Metals	ANTIMONY	ug/L	5	2	4.2	B	11/14/97	LF-01	
	ARSENIC	ug/L	5	2	3.1	B	11/26/97	LF-03	
	BARIUM	ug/L	5	5	82	Jn	5/23/97	LF-03	
	CALCIUM	ug/L	5	5	20000		5/23/97	LF-03	
	CHROMIUM	ug/L	5	2	2.20	B	02/19/98	LF-03	
	COBALT	ug/L	5	2	5.00	B	5/23/97	LF-03	
	COPPER	ug/L	5	5	15.6		11/26/97	LF-03	
	IRON	ug/L	5	2	910	Jf	11/26/97	LF-03	
	MAGNESIUM	ug/L	5	5	26100		5/23/97	LF-03	
	MANGANESE	ug/L	5	2	69.7	Jn	5/23/97	LF-03	
	MOLYBDENUM	ug/L	5	1	1.0	B	5/23/97	LF-03	
	NICKEL	ug/L	5	4	33.4		11/26/97	LF-03	
	POTASSIUM	ug/L	5	5	27500		11/26/97	LF-03	
	SELENIUM	ug/L	5	1	4.4		5/23/97	LF-03	
	SODIUM	ug/L	5	5	10900		5/23/97	LF-03	
	VANADIUM	ug/L	5	2	6.20	B	02/19/98	LF-03	
	ZINC	ug/L	5	2	20.00	B	02/19/98	LF-03	
General Chemical Parameters	ALKALINITY, TOTAL AS CaCO3	mg/L	5	5	155.		5/23/97	LF-03	
	CHLORIDES	mg/L	5	5	16.4		11/26/97	LF-03	
	HARDNESS	mg/L	5	4	158		5/23/97	LF-03	
	NITROGEN, NITRATE	mg/L	5	5	1.48		11/14/97	LF-01	
	SULFATE AS SO4	mg/L	5	4	18.5		5/23/97	LF-03	
	TOTAL DISSOLVED SOLIDS	mg/L	5	5	247.		5/23/97	LF-03	
	TOTAL ORGANIC CARBON	mg/L	5	5	28.3		5/23/97	LF-03	
Volatile Organics Compounds	2-BUTANONE	ug/L	5	4	3.3	J	5/23/97	LF-03	
	ACETONE	ug/L	5	2	8.9		5/23/97	LF-03	
Radionuclides	GROSS BETA	pCi/L	5	4	27.2	C	11/26/97	LF-03	
	RADIUM-226	pCi/L	5	2	1.09	Jf	11/26/97	LF-03	

Table 4
Proposed Groundwater Elevation Monitoring Locations and Frequency
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Water Level Measurement Frequency	Well	Water Level Measurement Frequency
UCD1-01	Q	UCD1-23	Q
UCD1-03	Q	UCD1-24	Q
UCD1-04	Q	UCD1-25	Q
UCD1-05	Q	UCD1-26	Q
UCD1-06	Q	UCD1-28	Q
UCD2-07	Q	UCD2-29	Q
UCD1-08	Q	UCD2-30	Q
UCD1-09	Q	UCD2-31	Q
UCD1-10	Q	UCD2-32	M
UCD1-11	Q	UCD1-34	Q
UCD1-12	Q	UCD2-35	Q
UCD1-13	Q	UCD2-36	Q
UCD2-14	Q	UCD2-37	Q
UCD2-15	Q	UCD2-38	Q
UCD2-16	Q	UCD2-39	Q
UCD2-17	Q	UCD2-40	M
UCD1-18	Q	UCD4-41	M
UCD1-19	Q	UCD4-42	M
UCD1-20	Q	UCD4-43	M
UCD1-21	Q	EW2-1	Q
UCD1-22	Q	IW2-1	Q

Q = Quarterly (February, May, August and November)

M = Monthly

Table 5
Proposed Groundwater Monitoring Parameters and Schedule
1998 Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Analyte/Analysis					
	Tritium	C-14	Nitrate ^(c)	Total Cr ^(e)	VOC ^(a)	TDS ^(f)
UCD1-28	Q	Q	Q	Q	Q	Q
UCD2-07	Q	Q	Q	Q	Q	Q
UCD2-14	Q	Q	Q	Q	Q	Q
UCD2-15	Q	Q	Q	Q	Q	Q
UCD2-16	Q	Q	Q	Q	Q	Q
UCD2-17	Q	Q	Q	Q	Q	Q
UCD2-26	Q	Q	Q	Q	Q	Q
UCD2-29	Q	Q	Q	Q	Q	Q
UCD2-30	Q	Q	Q	Q	Q	Q
UCD2-31	Q	Q	Q	Q	Q	Q
UCD2-32 ^(d)	Q	Q	Q	Q	Q	Q
UCD2-35	Q	Q	Q	Q	Q	Q
UCD2-36	Q	Q	Q	Q	Q	Q
UCD2-37	Q	Q	Q	Q	Q	Q
UCD2-38	Q	Q	Q	Q	Q	Q
UCD2-39	Q	Q	Q	Q	Q	Q
UCD2-40 ^(d)	Q	Q	Q	Q	Q	Q
UCD4-41 ^(d)	Q	Q	Q	Q	Q	Q
UCD4-42 ^(d)	Q	Q	Q	Q	Q	Q
UCD4-43 ^(d)	Q	Q	Q	Q	Q	Q

New wells added to the monitoring program will be sampled quarterly for all constituents for a minimum of four quarters.

S = Semiannual sampling (February and August); Q, = quarterly sampling (February, May, August and November)

Field analyses for all wells shall include pH, oxidation/reduction potential, turbidity, electrical conductivity and temperature.

(a) VOC = Volatile Organic Compounds (including chloroform)

(c) Nitrate = Nitrate as N

(d) Wells associated with the HSU-4 RI/FS investigation

(e) Total Cr = Total (all valent states) Dissolved Chromium

(f) TDS = total dissolved solids

Table 6
Proposed Storm Water Runoff Monitoring Parameters and Schedule
1998 Annual Monitoring Report
LEHR/SCDS Environmental Restoration
University of California, Davis

Location	Analyte/Analysis ^(a)												
	Radiological Analytes				VOCs ^(b,c)	Metals ^(c)	Nitrate	Chromium (hexavalent)	TSS ^(e) / TDS	Pesticides & PCBs ^(c)	TOC ^(e)	Chronic Aquatic Toxicity ^(d)	Oil & Grease ^(e)
	Tritium	C-14	Sr-90	Ra-226									
LF-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LF-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = collected during two storm events per year: a storm event early in the rainy season (typically in October or November) and a precipitation event in the middle or late part of the rainy season (typically in February or March).

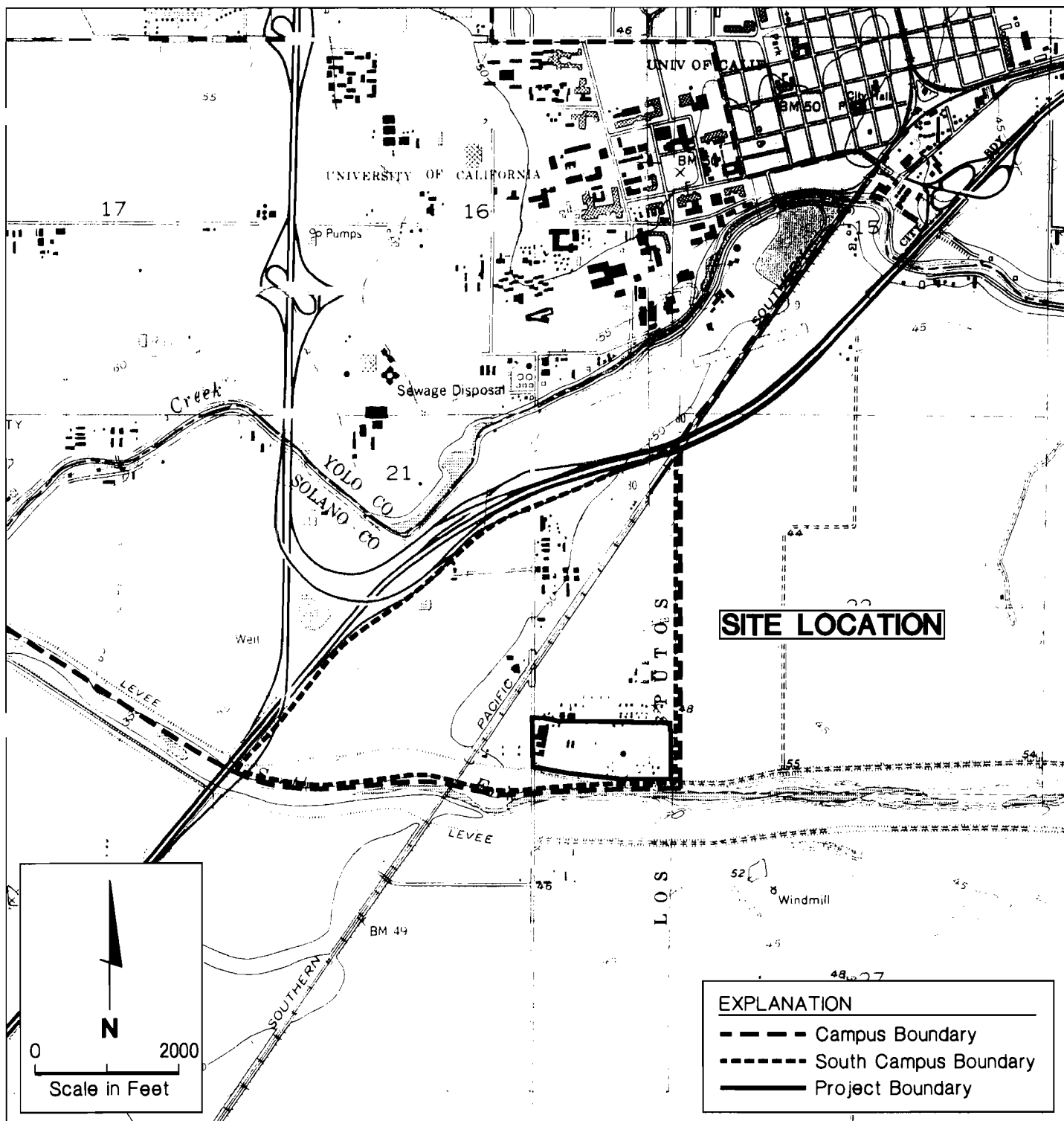
(a) At each sampling event, samples are analyzed for pH, Eh, electrical conductivity, temperature, and turbidity in the field, flow measurements calculated; and a stream gauge measurement is recorded.

(b) Volatile organic compounds.

(c) See FSP Table 8a for specific compounds for VOC, pesticide, and PCB analysis. Metals analysis includes: antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, chromium, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc.

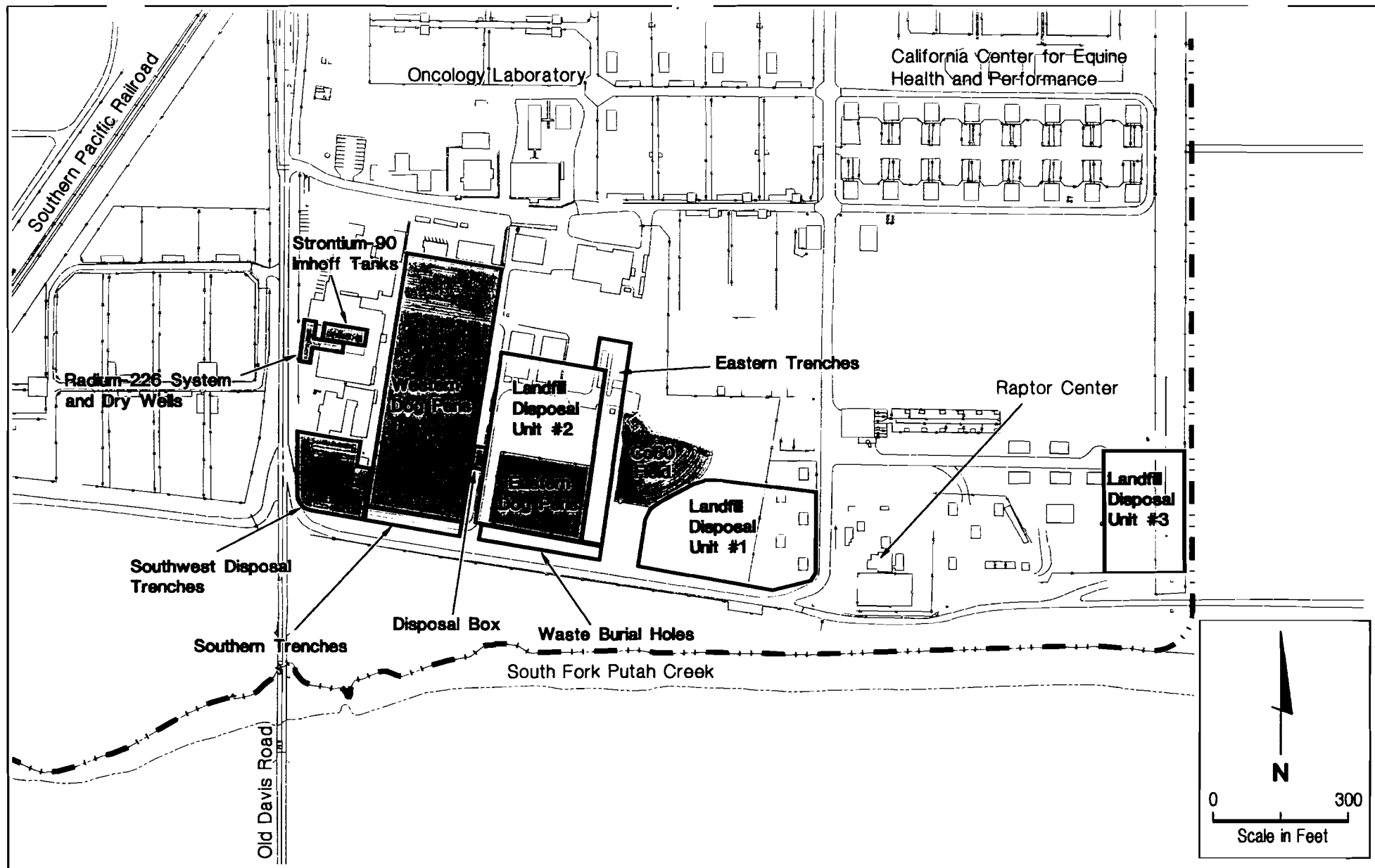
(d) Chronic Aquatic Toxicity Analysis may include measurements of alkalinity, hardness, dissolved oxygen, pH, and ammonia.

(e) Monitoring parameter specified by General Industrial Storm Water Permit.



REFERENCE: USGS 7.5 Quadrangle, Merritt, CA, 1952, photorevised 1981;
and Davis, CA, 1952, photorevised 1981.





EXPLANATION

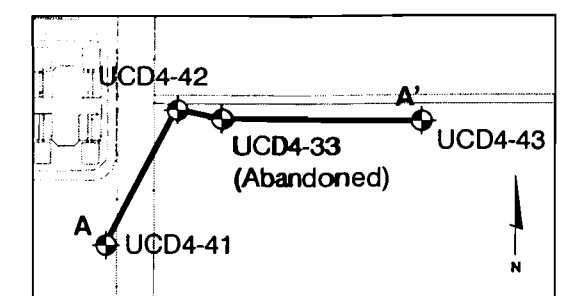
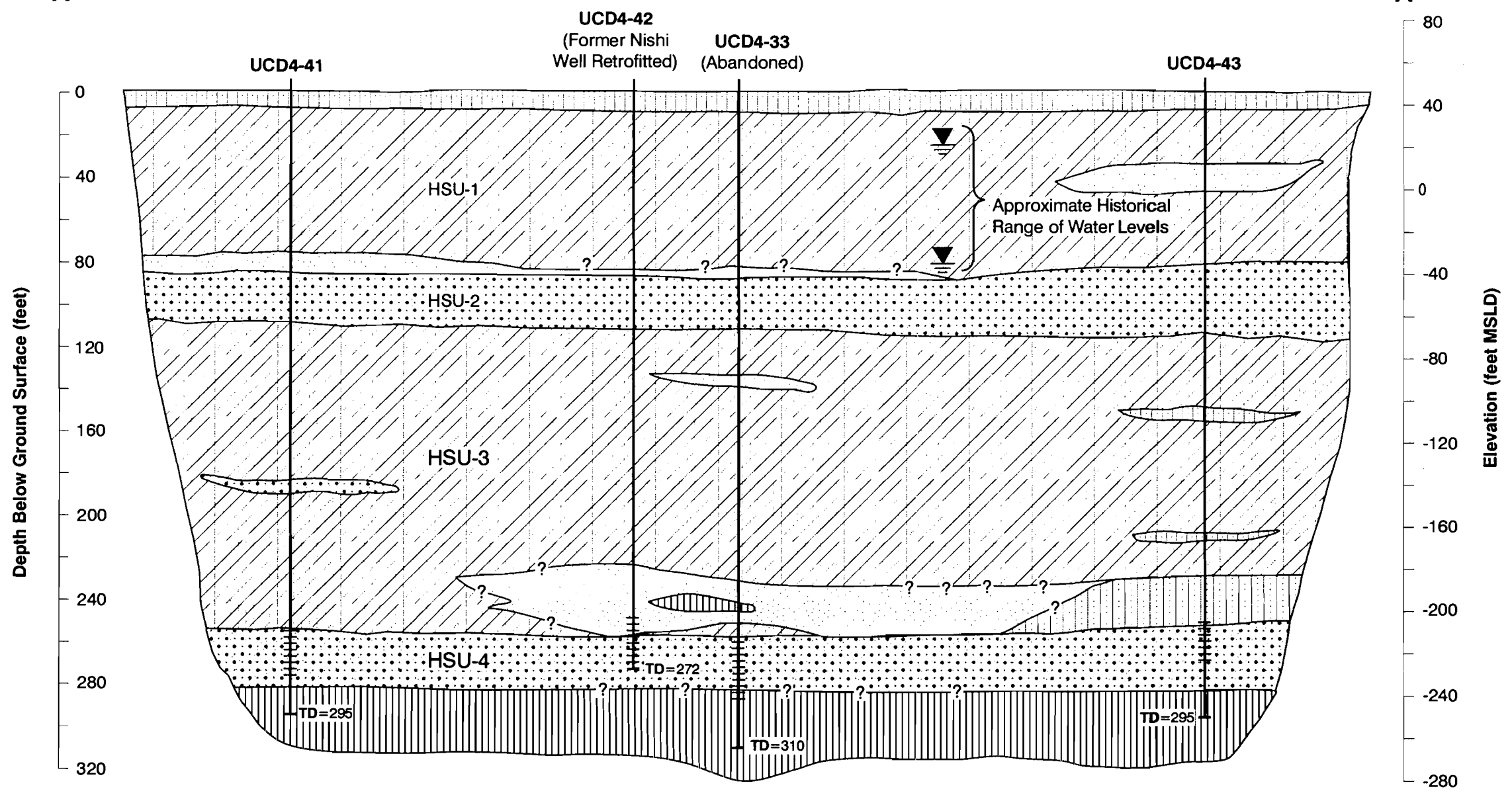
- · · · — Campus Boundary
- DOE Responsibility (within LEHR Site)
- UC Davis Responsibility Areas (SCDS)

WASTE DISPOSAL UNITS

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 LEHR/SCDS Environmental Restoration
 Davis, California

West
A

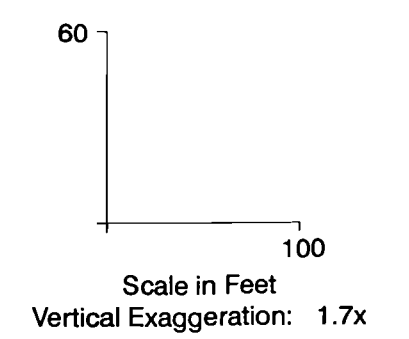
East
A'



Cross-Section
Location Map

EXPLANATION

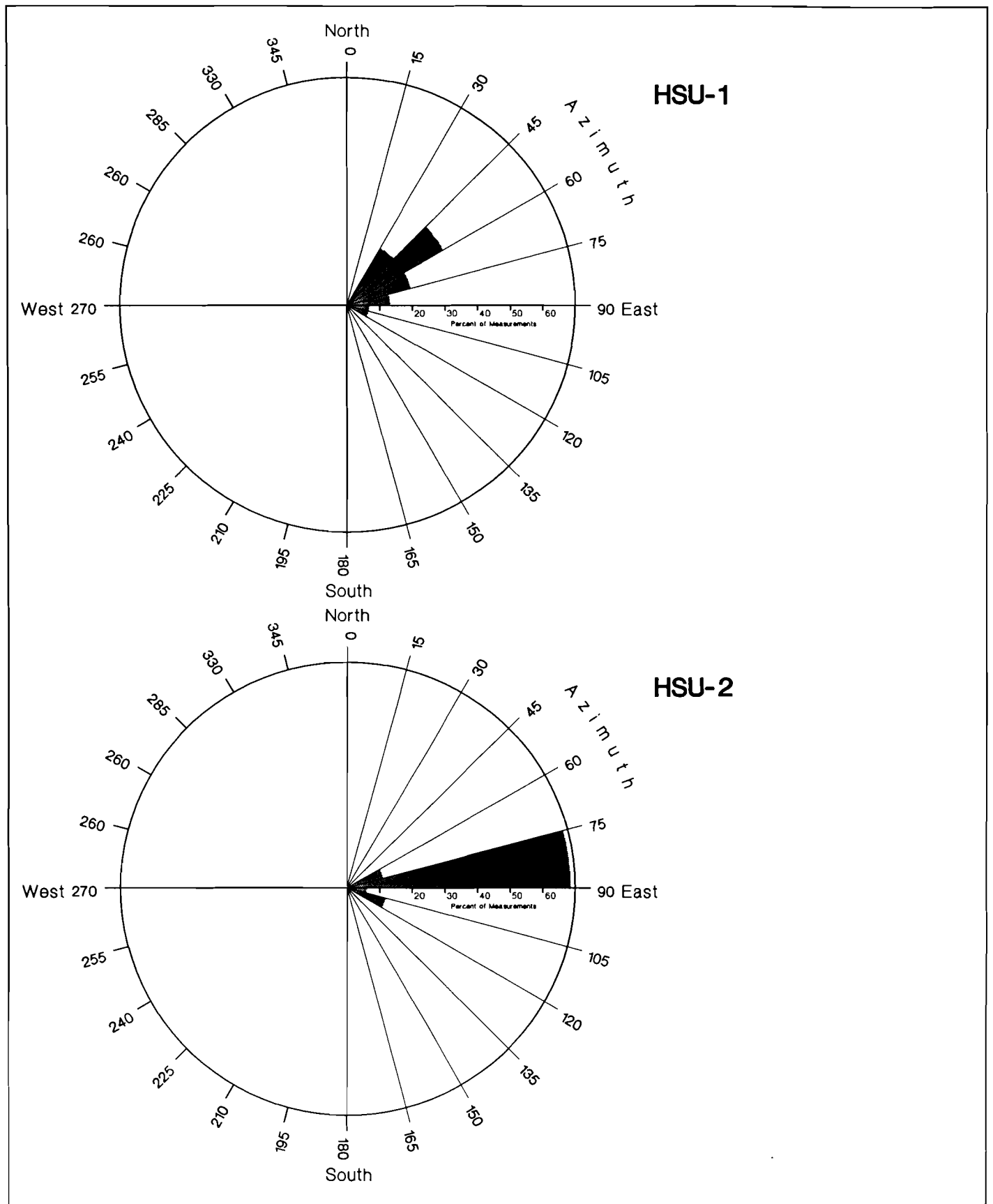
- UCD4-43 HSU4 Monitoring Well
- Screened Interval
- TD=295 Total Depth of Boring in feet
- Geologic Contact
- Geologic Contact Uncertain
- Fine Grained Silty Sand (SM)
- Interbedded Clayey Silt (ML) to Silty Clay (CL)
- Fine to Coarse Grained Sand (SP)
- Coarse Grained Sandy Gravel (GP)
- Silt (ML) With Some Sand and Clay



GENERALIZED HYDROSTRATIGRAPHIC
CROSS-SECTION

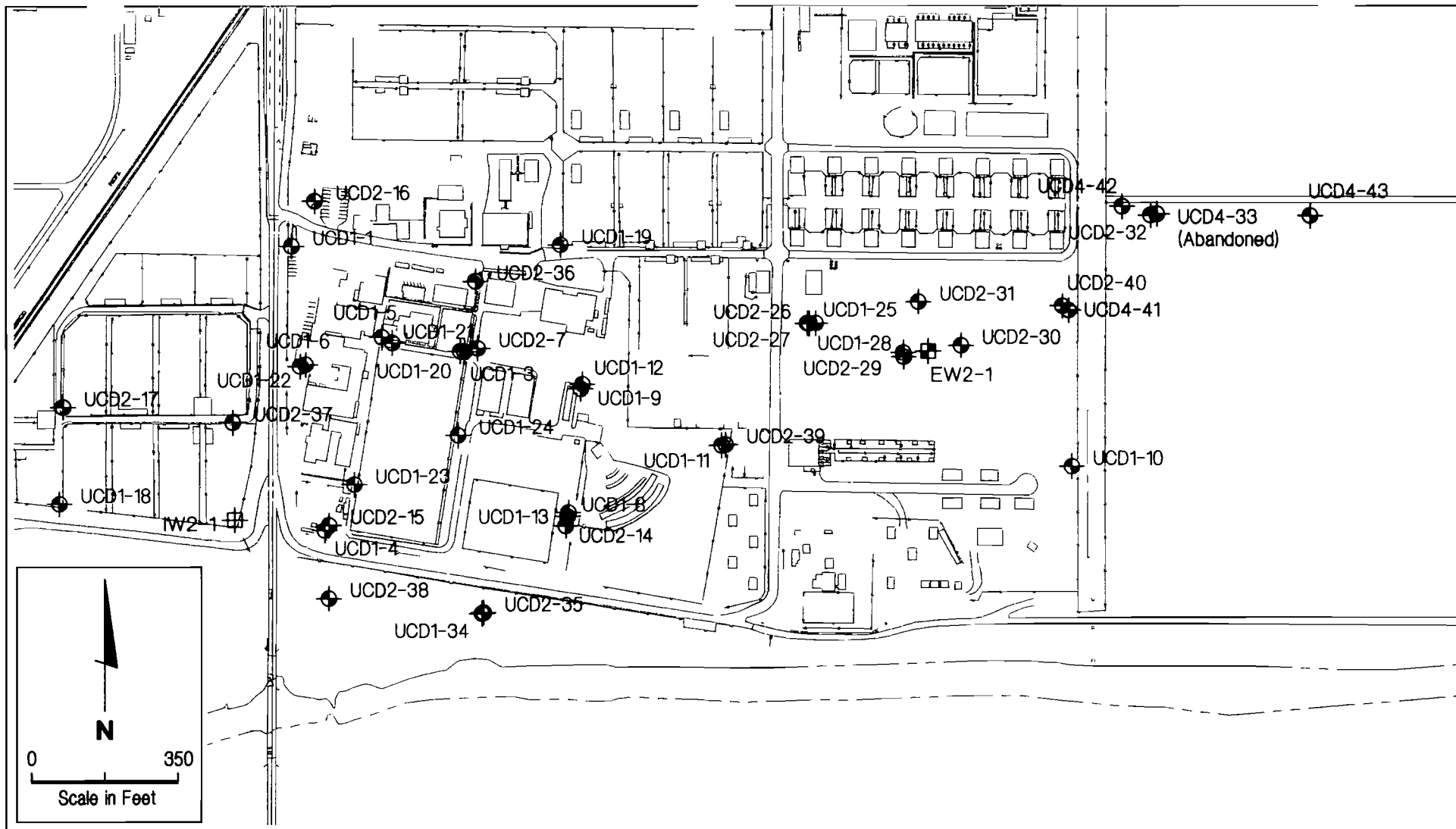
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

FIGURE 3



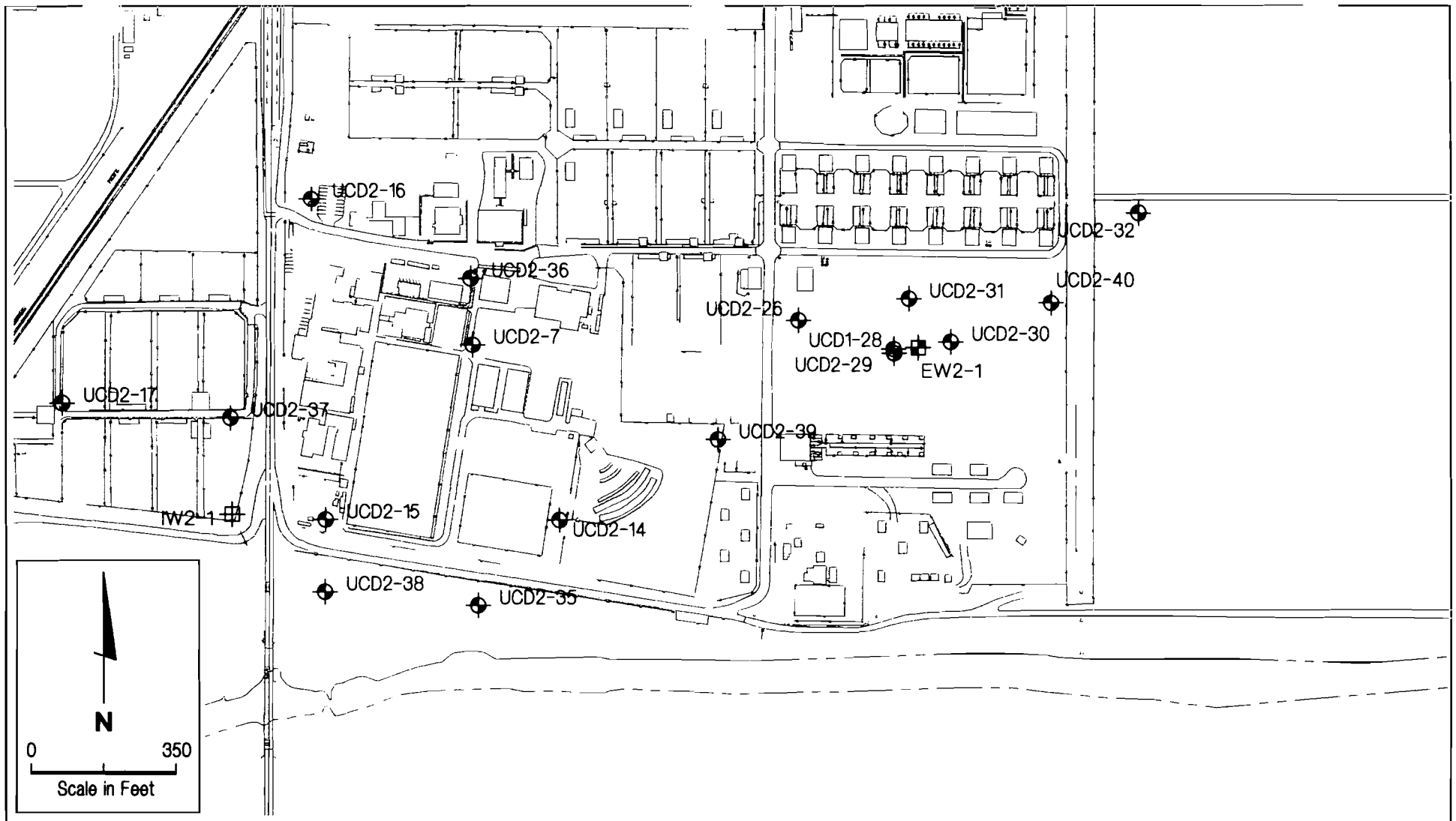
GROUNDWATER FLOW DIRECTION CONSISTENCY DIAGRAM, HSU-1 AND HSU-2, 1994-1998

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LEHR/SCDS Environmental Restoration
Davis, California



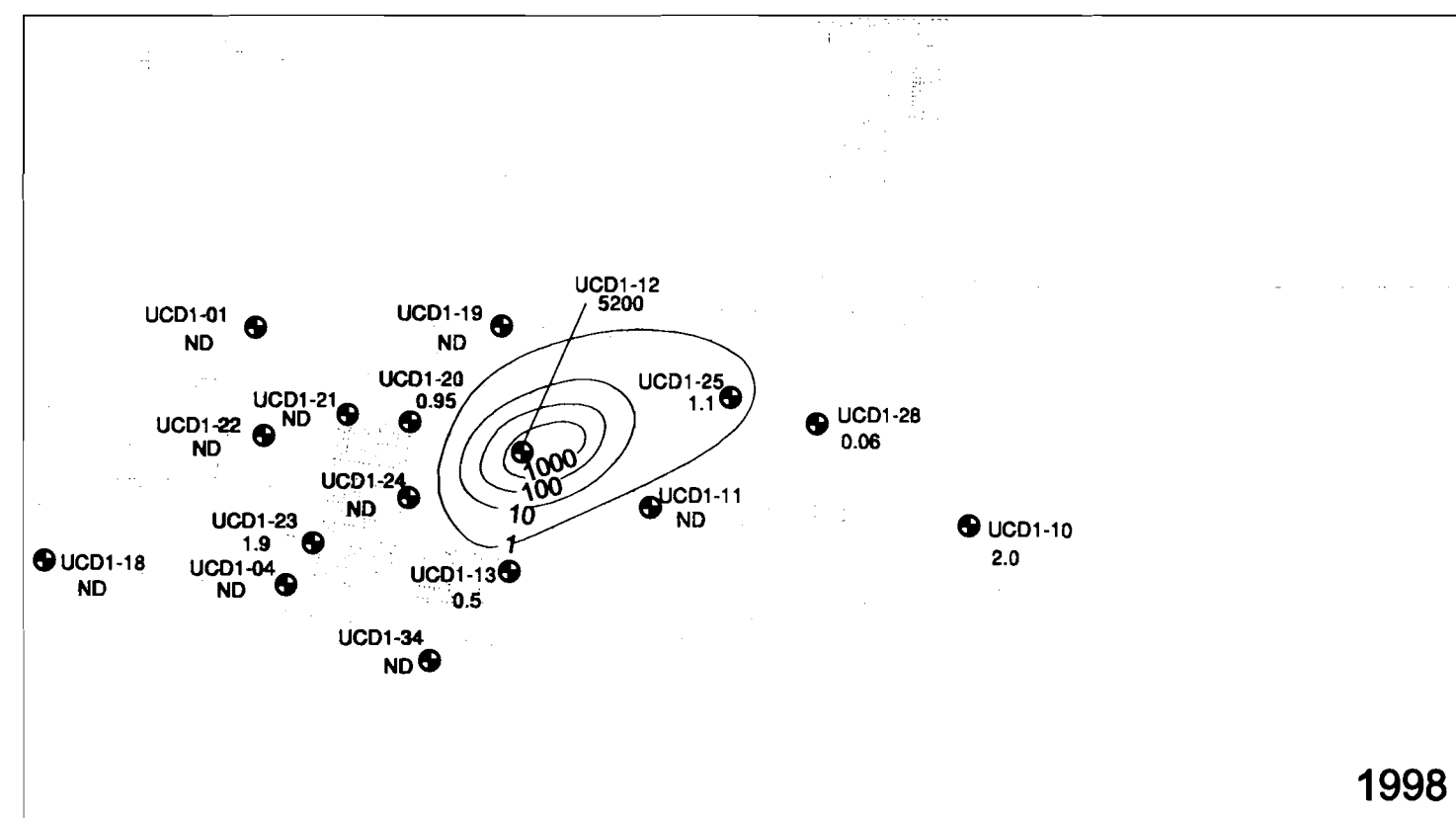
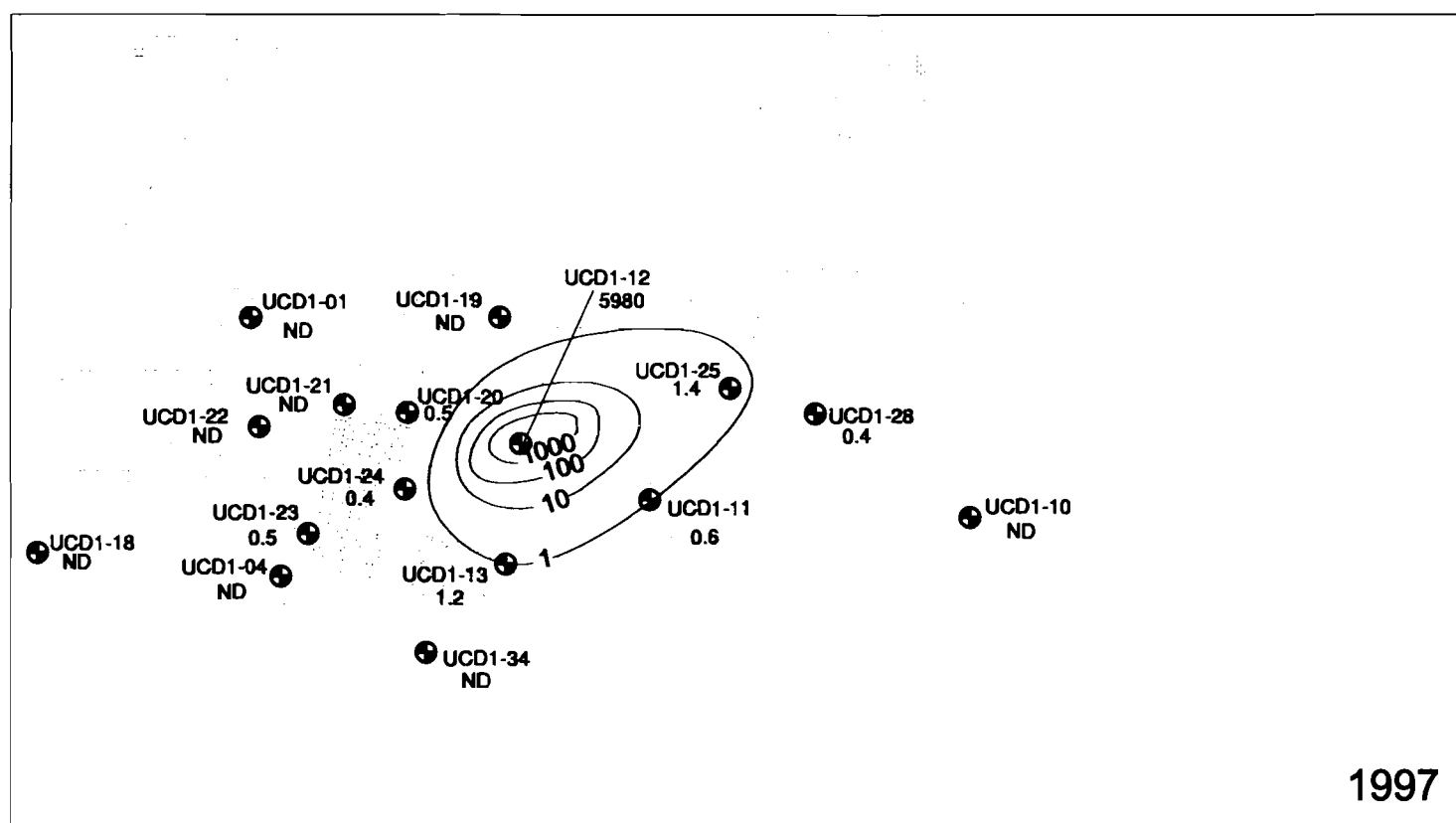
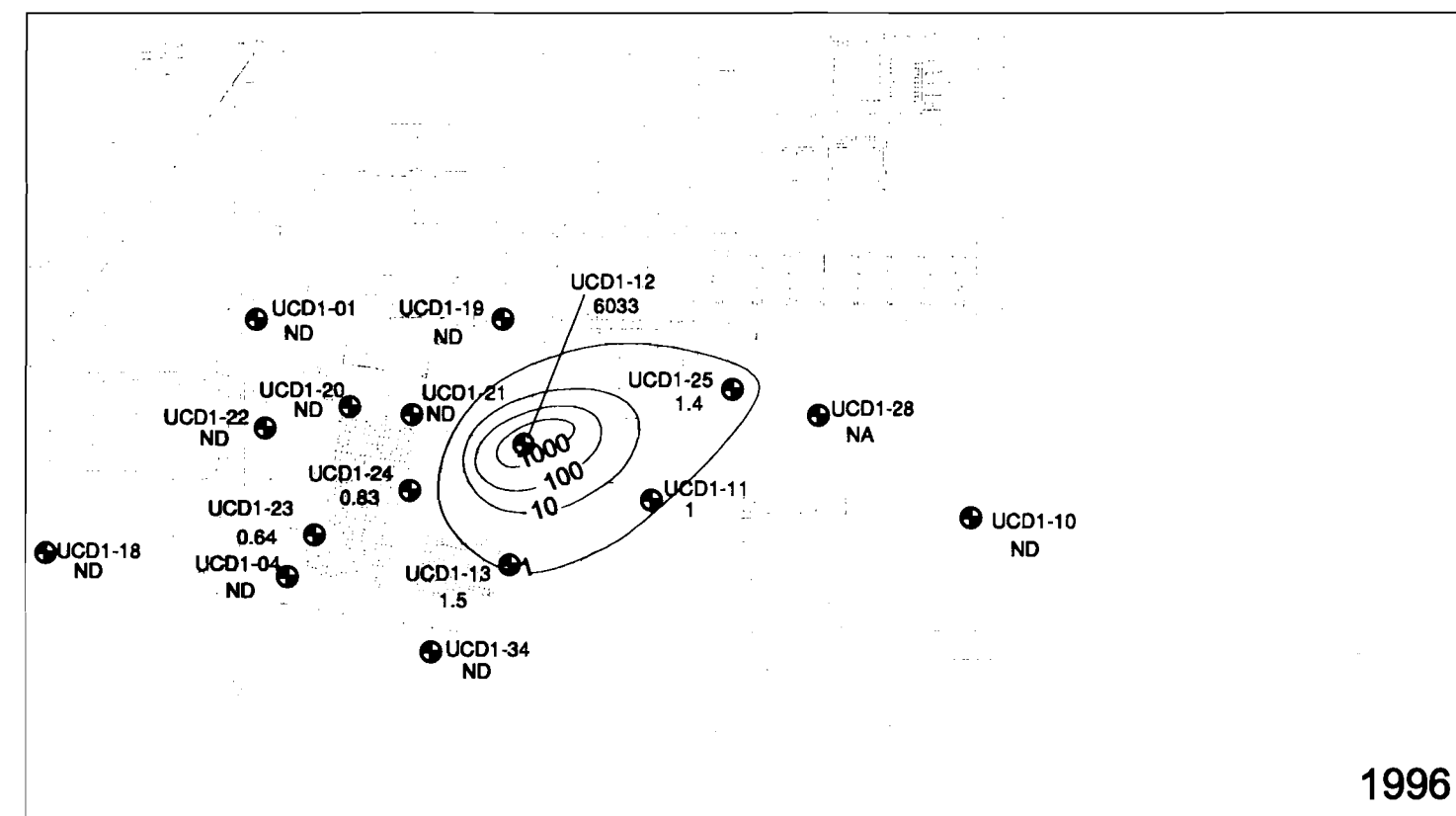
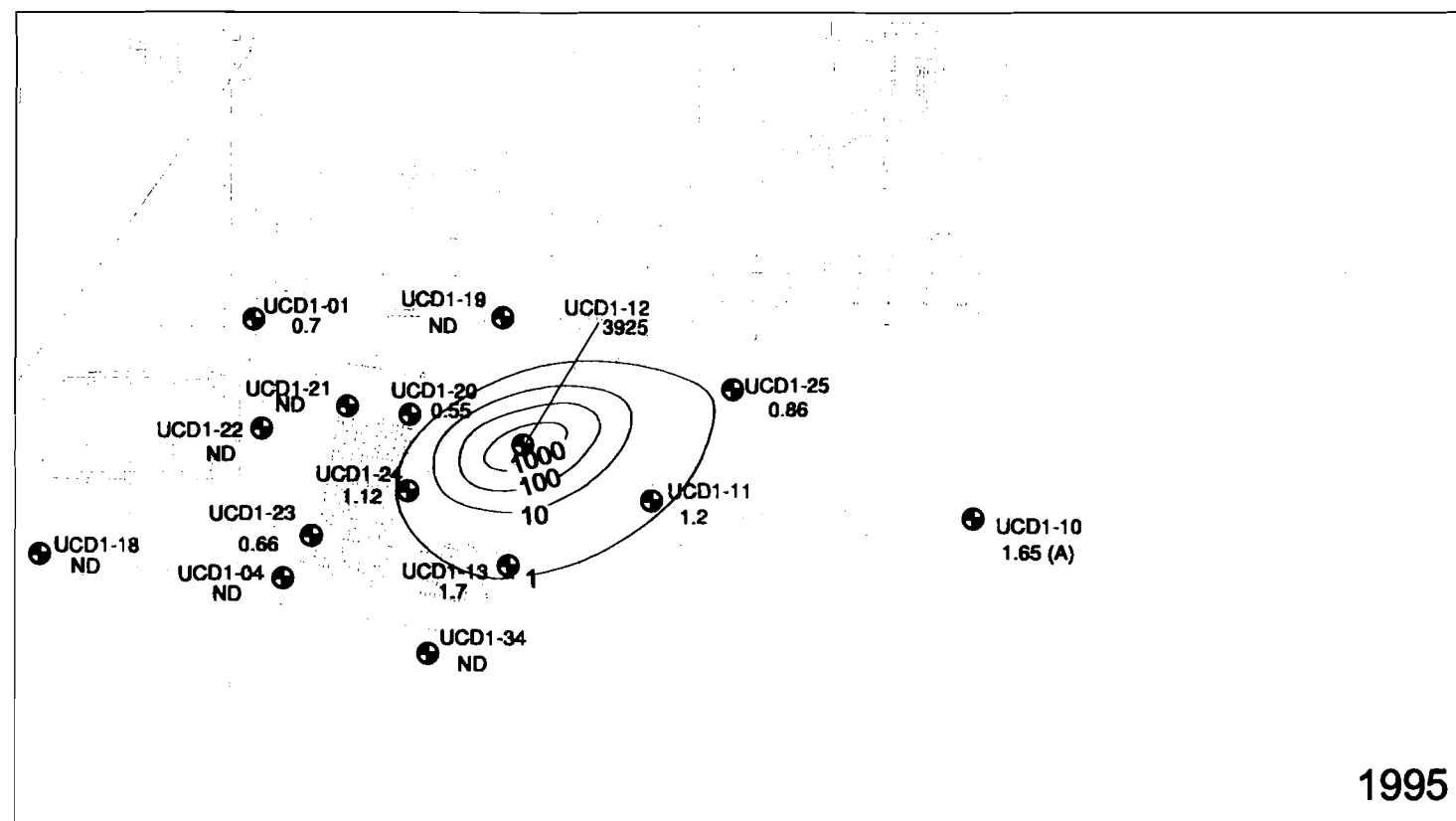
EXPLANATION

- ◆ UCD1-11 HSU-1 Monitoring Well
- ◆ UCD2-17 HSU-2 Monitoring Well
- ⊞ EW2-1 HSU-2 Extraction Well
- ⊞ IW2-1 HSU-2 Injection Well
- ◆ UCD4-33 HSU-4 Monitoring Well

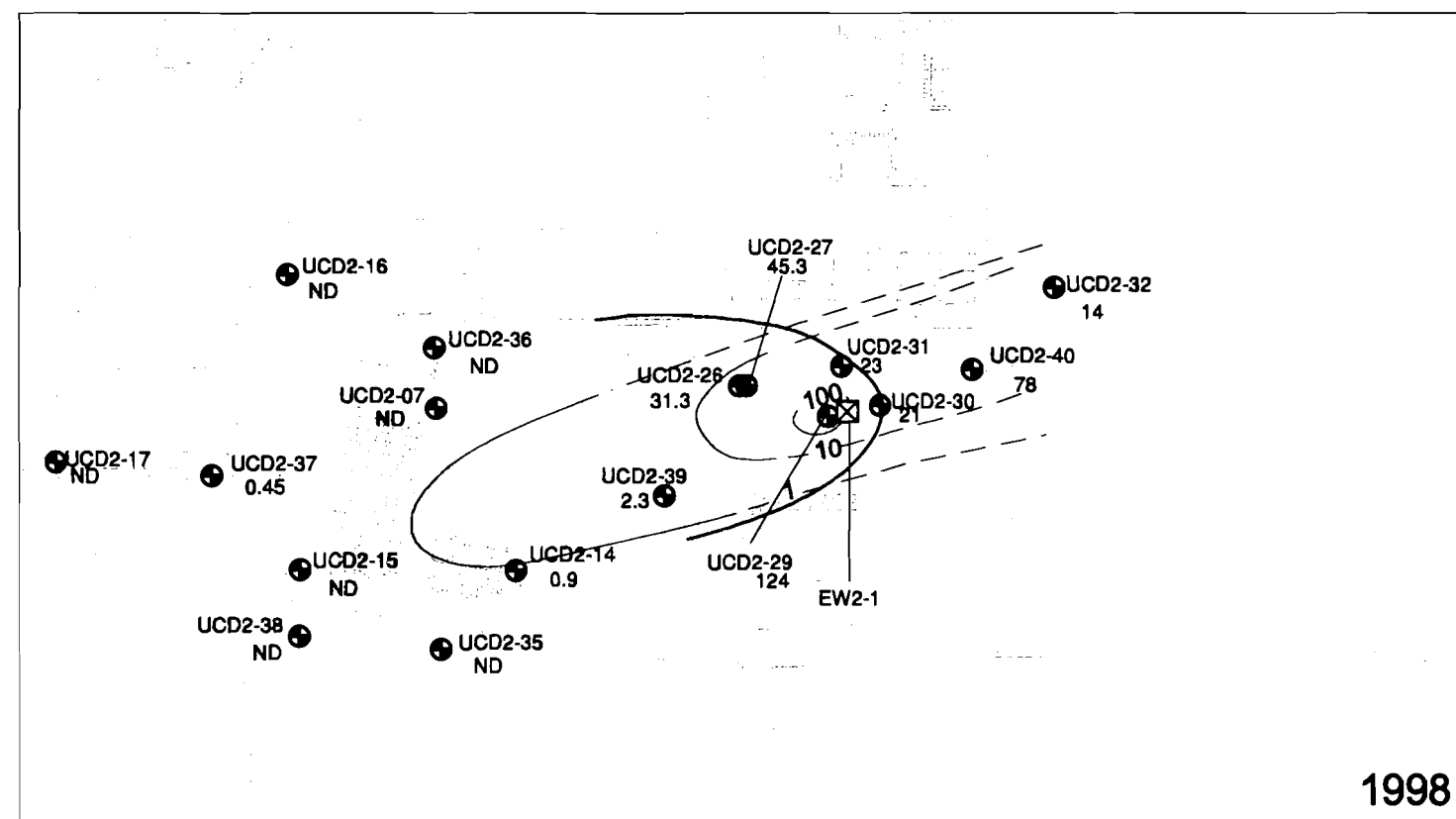
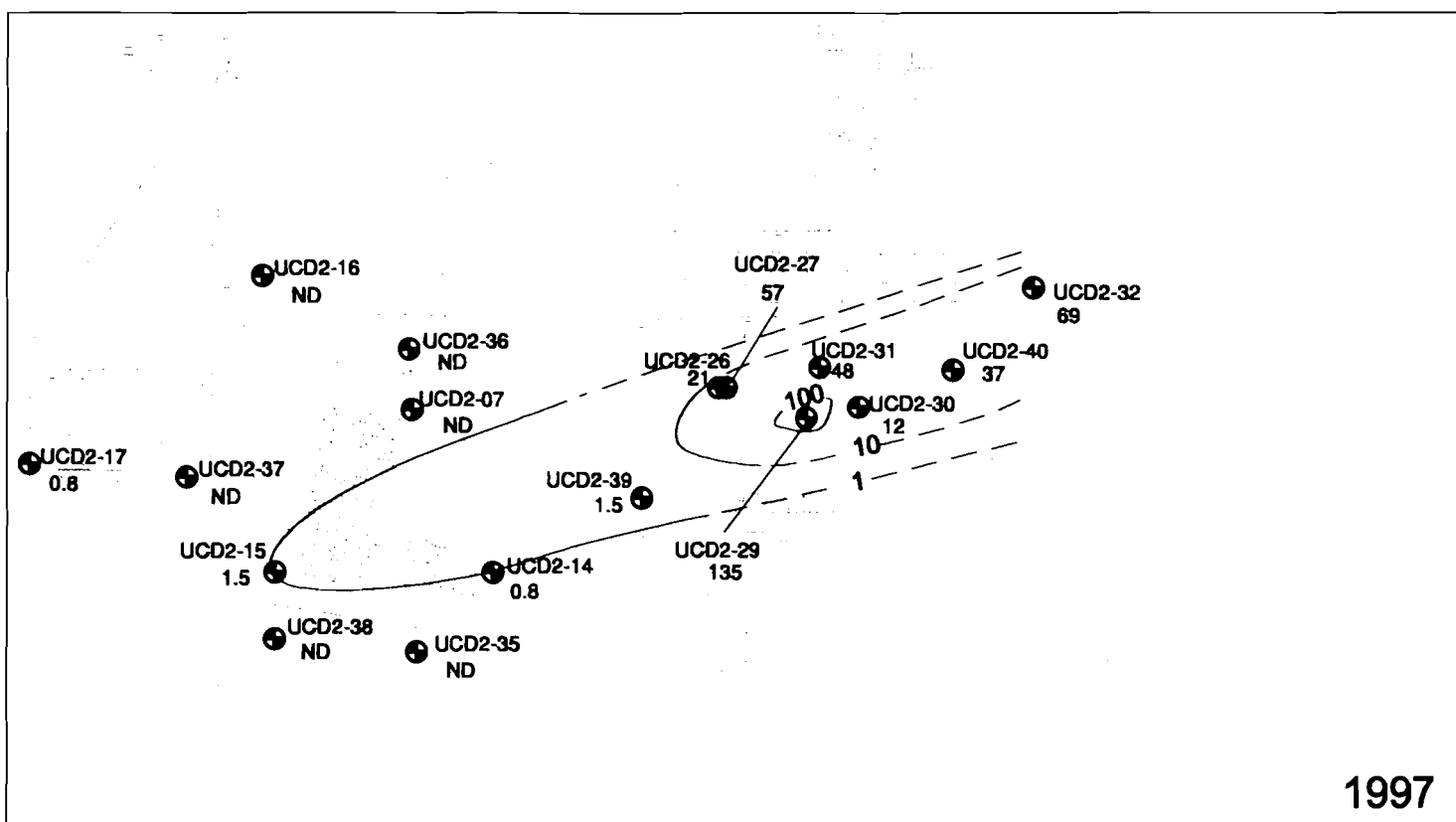
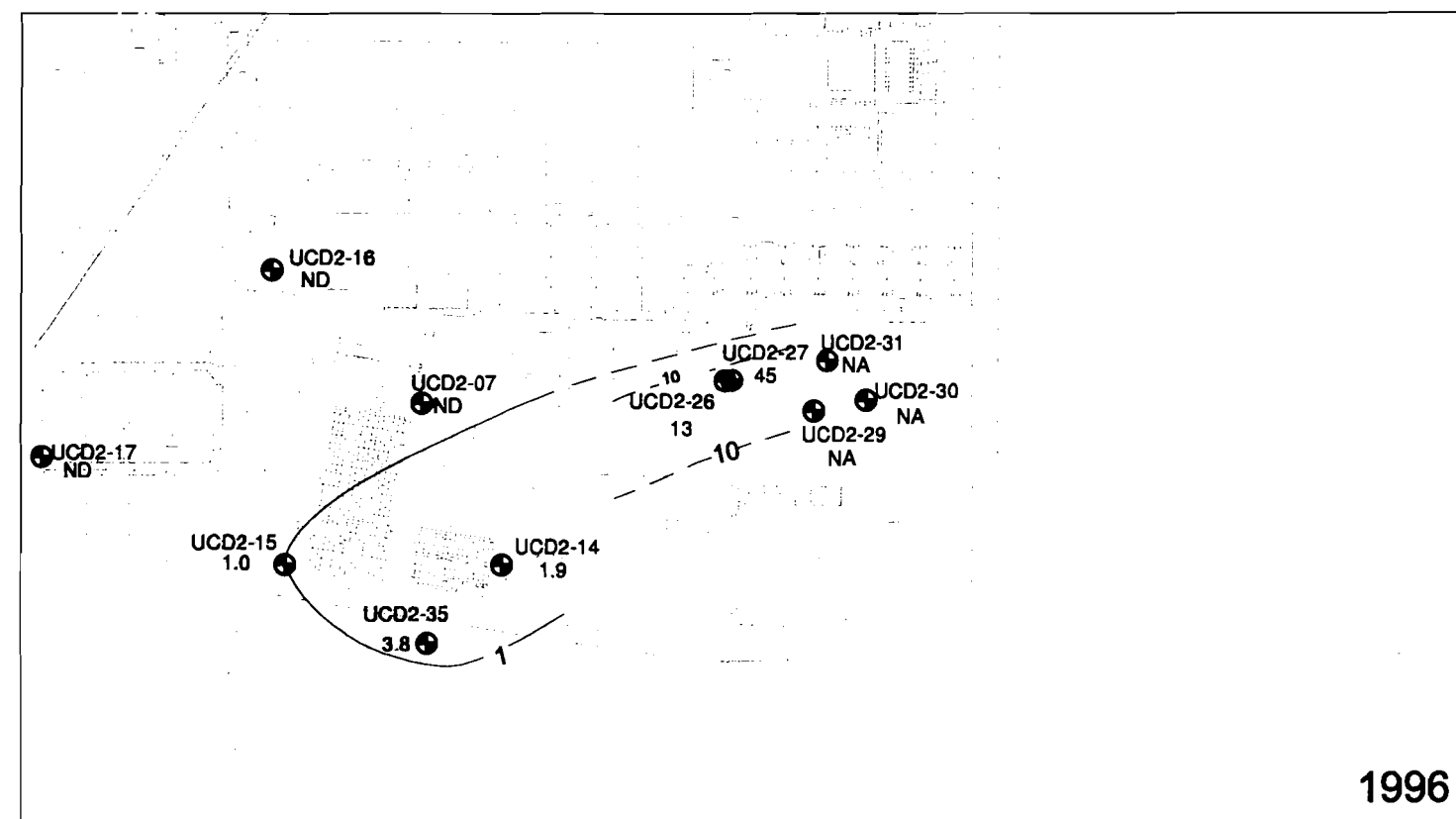
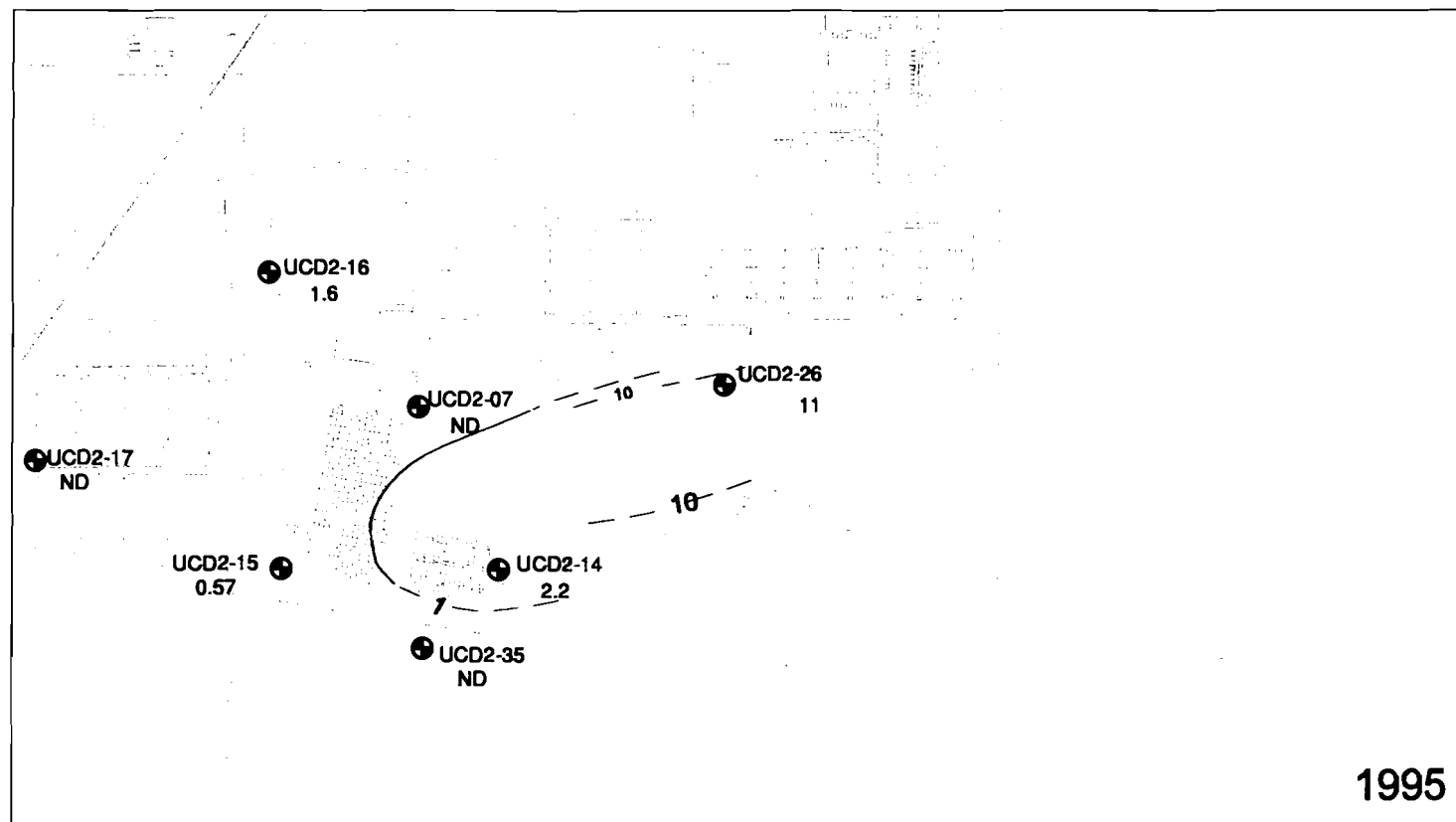


EXPLANATION

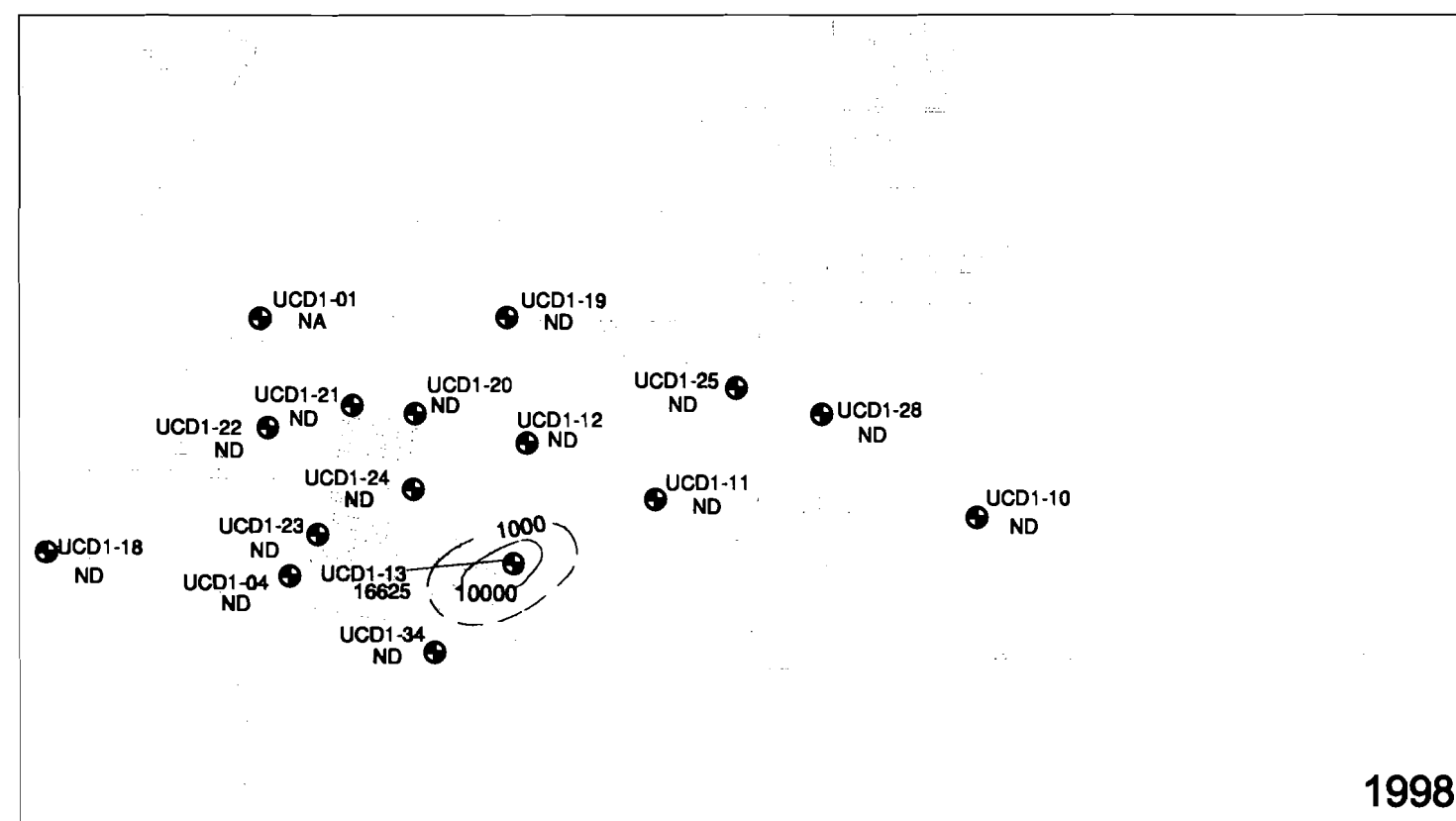
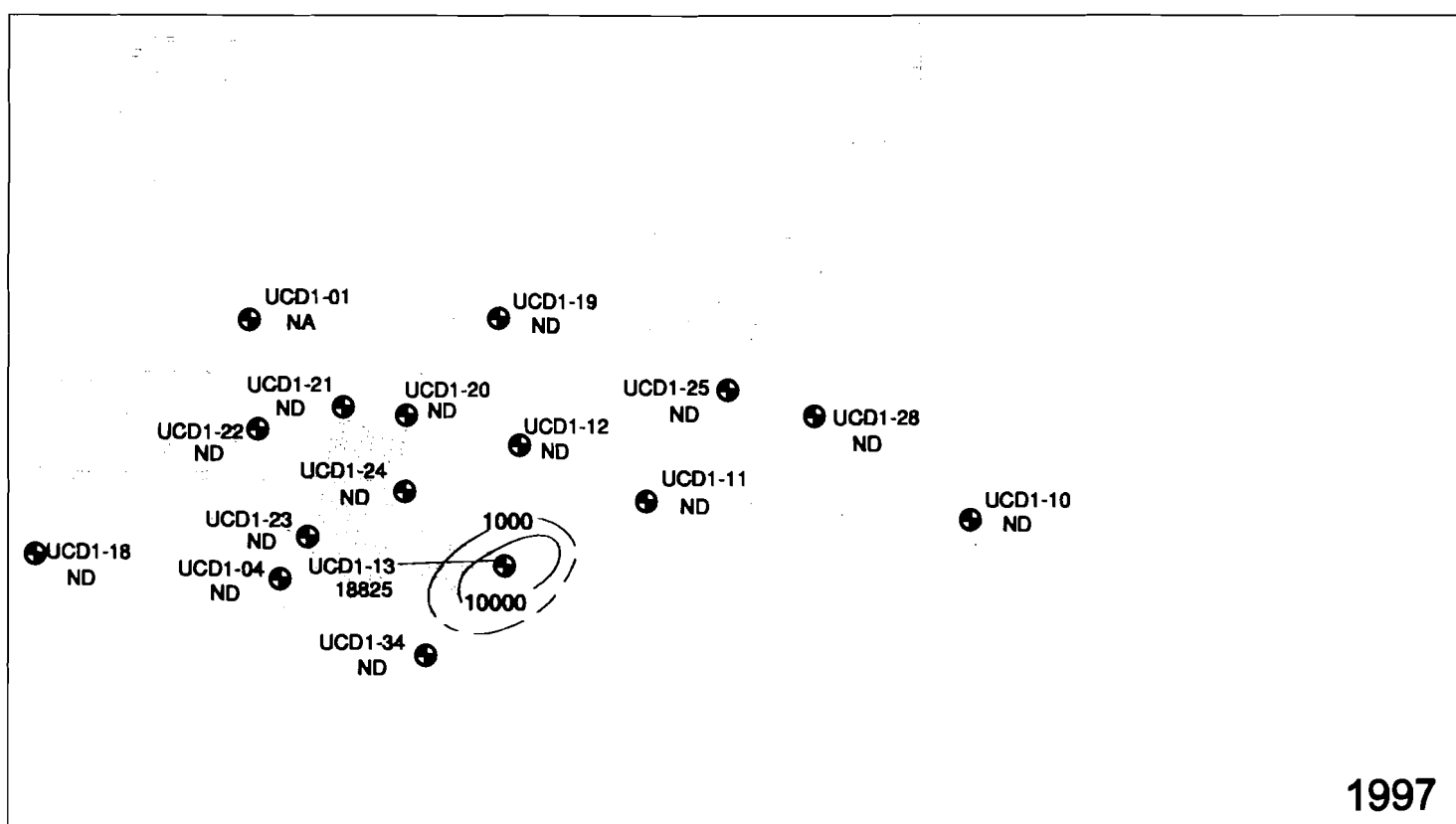
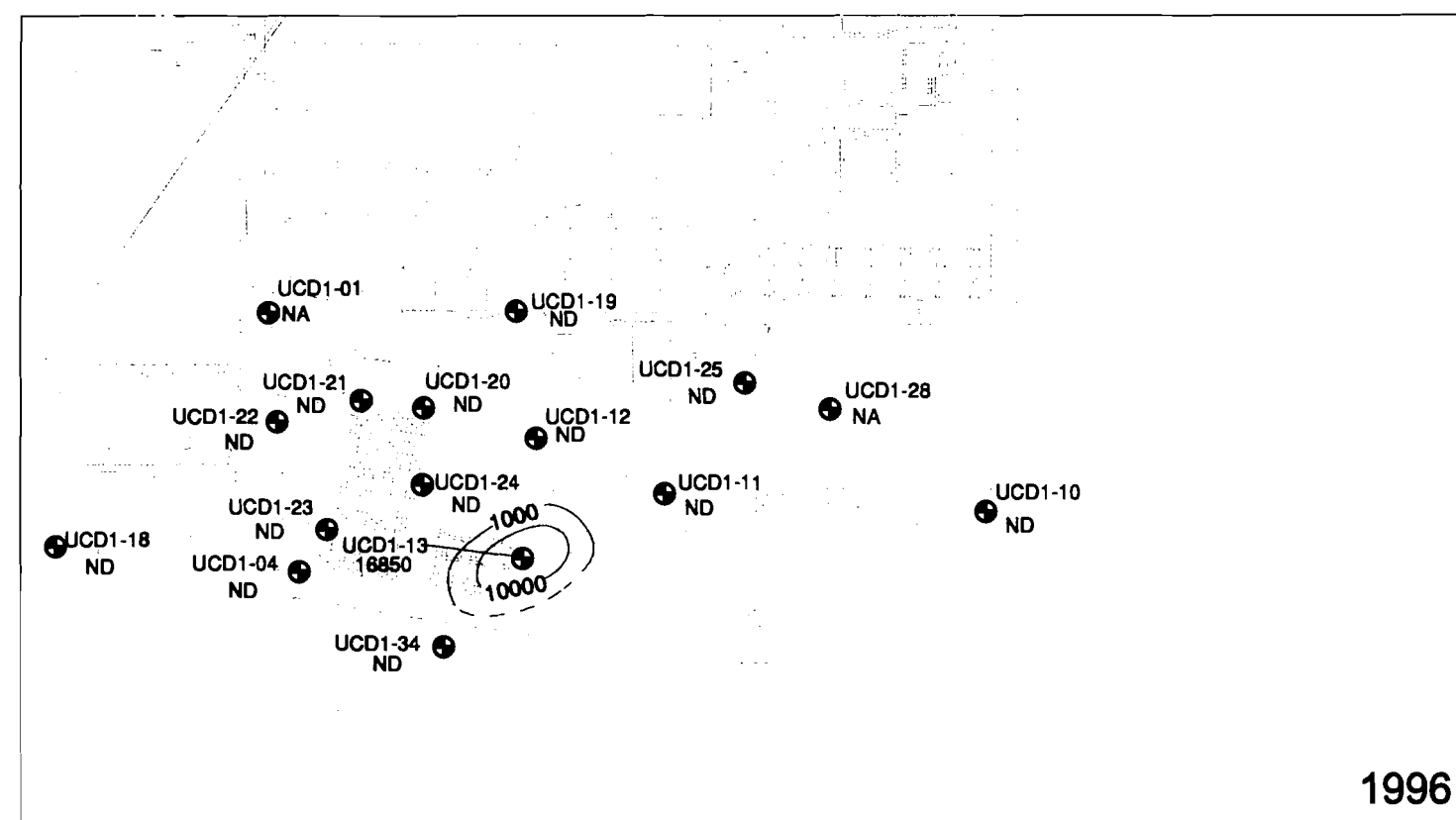
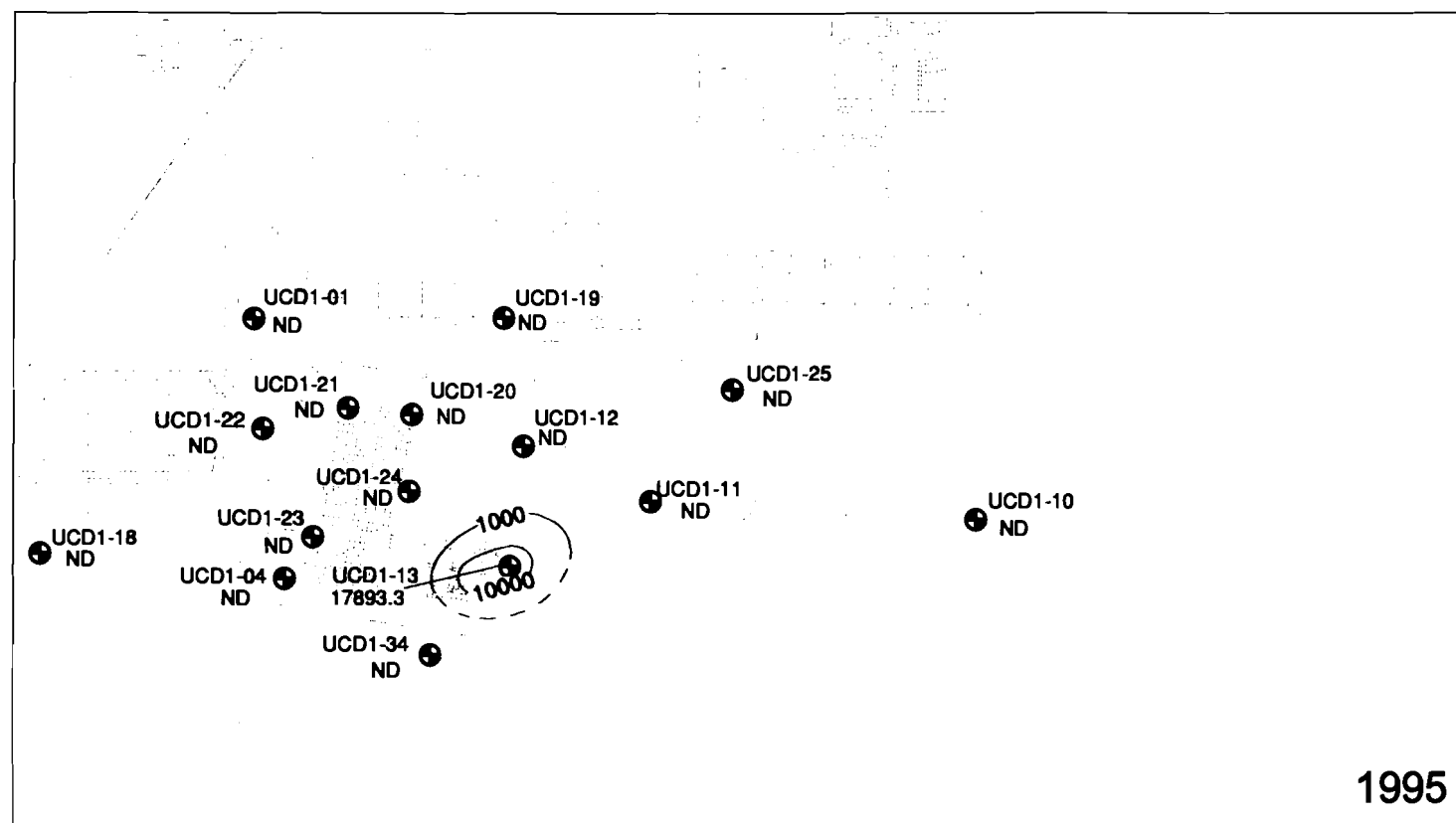
- ◆ UCD1-28 HSU-1 Monitoring Well
- ◆ UCD2-17 HSU-2 Monitoring Well
- ⊞ EW2-1 HSU-2 Extraction Well
- ⊞ IW2-1 HSU-2 Injection Well



LEGEND
 ● UCD1-11 HSU-1 Monitoring Well
 All results reported in ug/L
 Results represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected

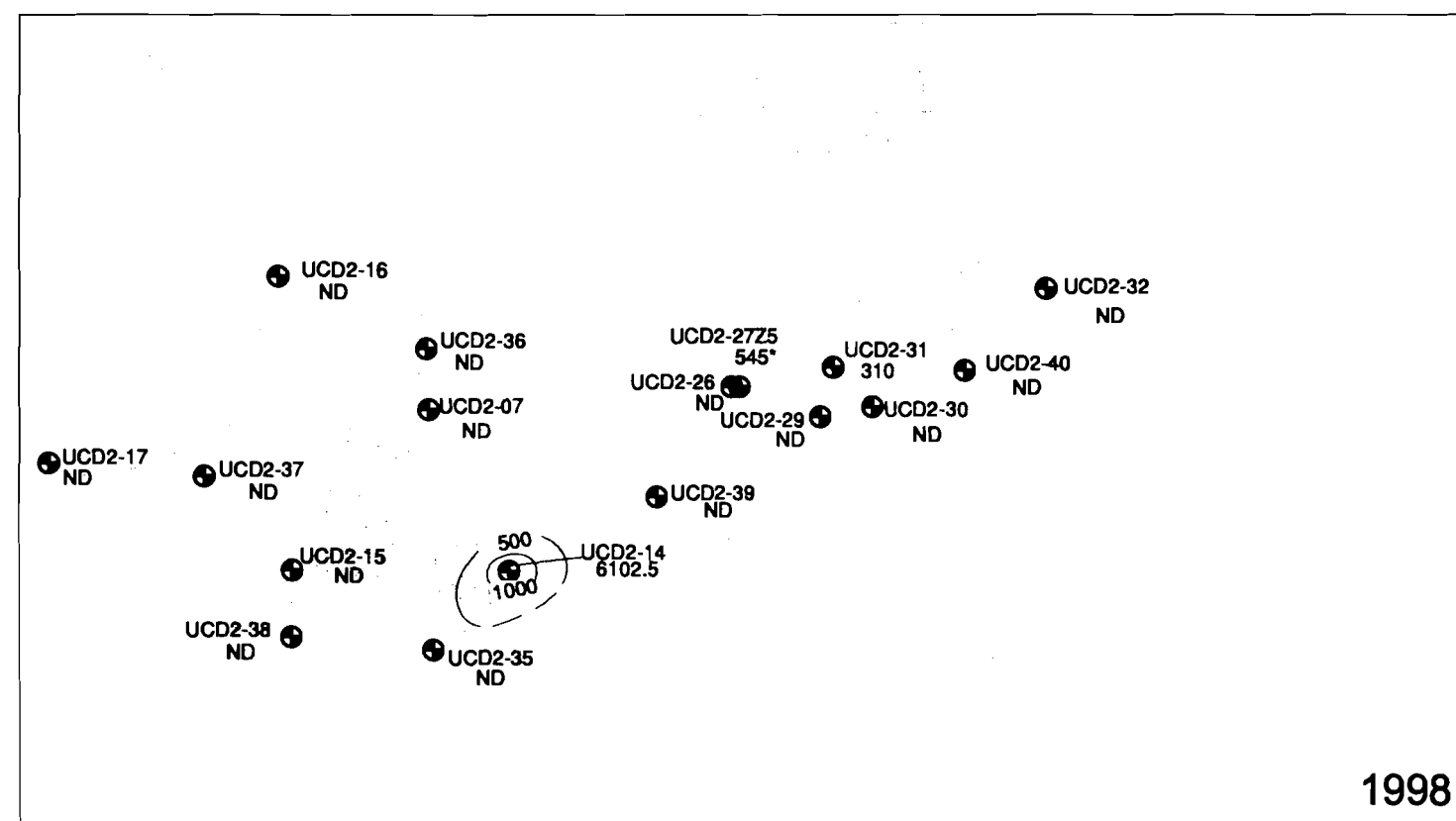
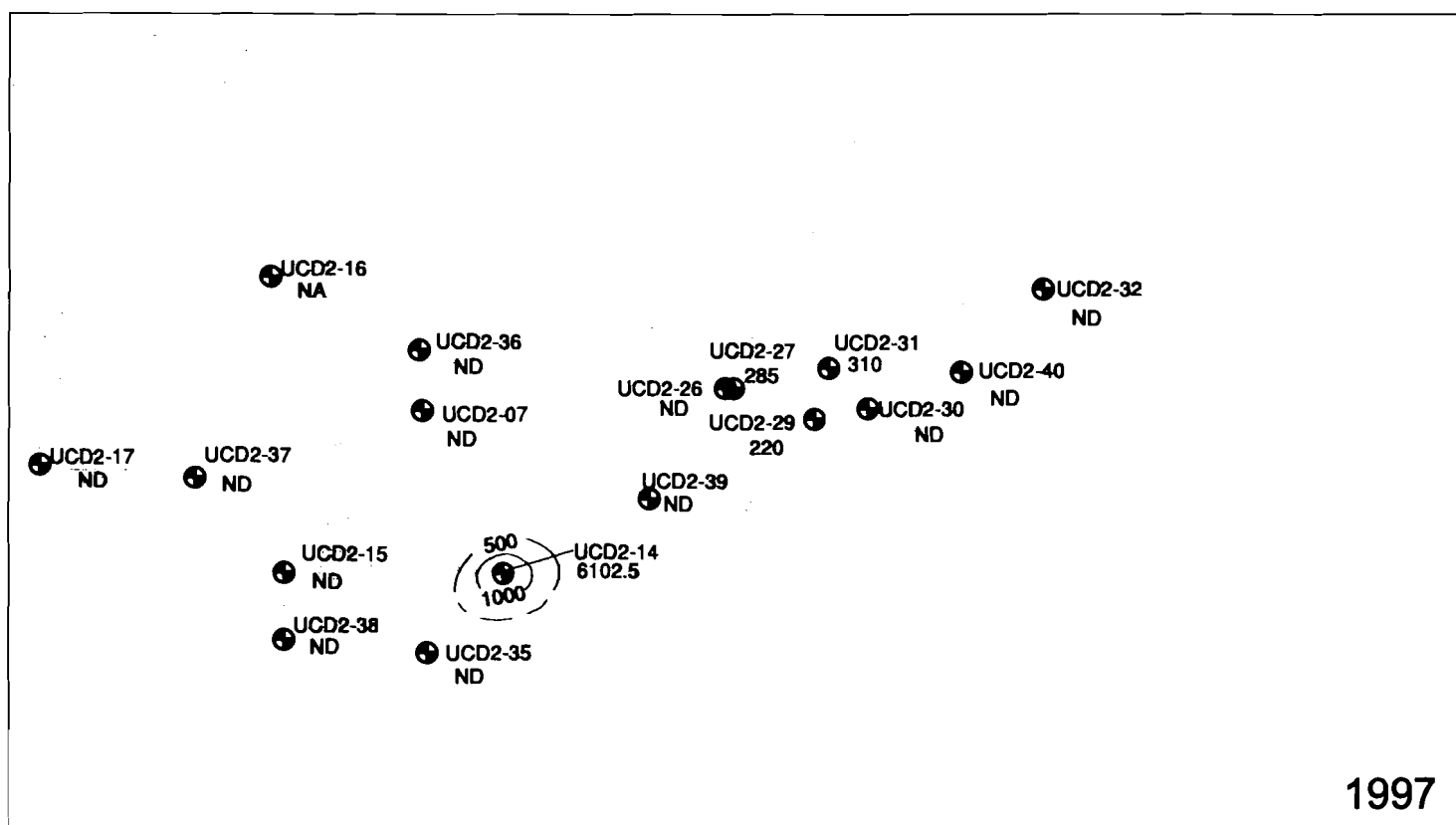
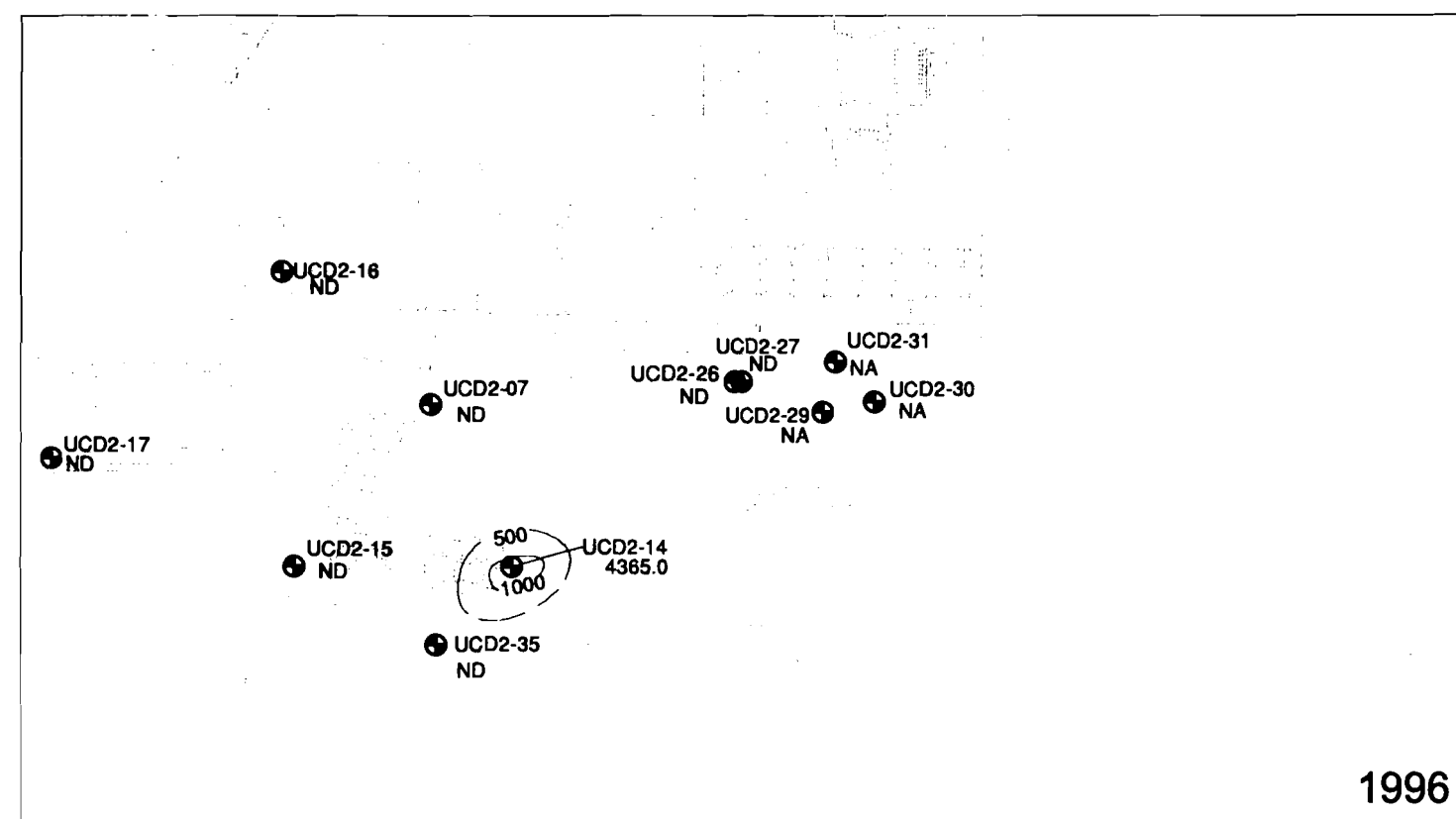
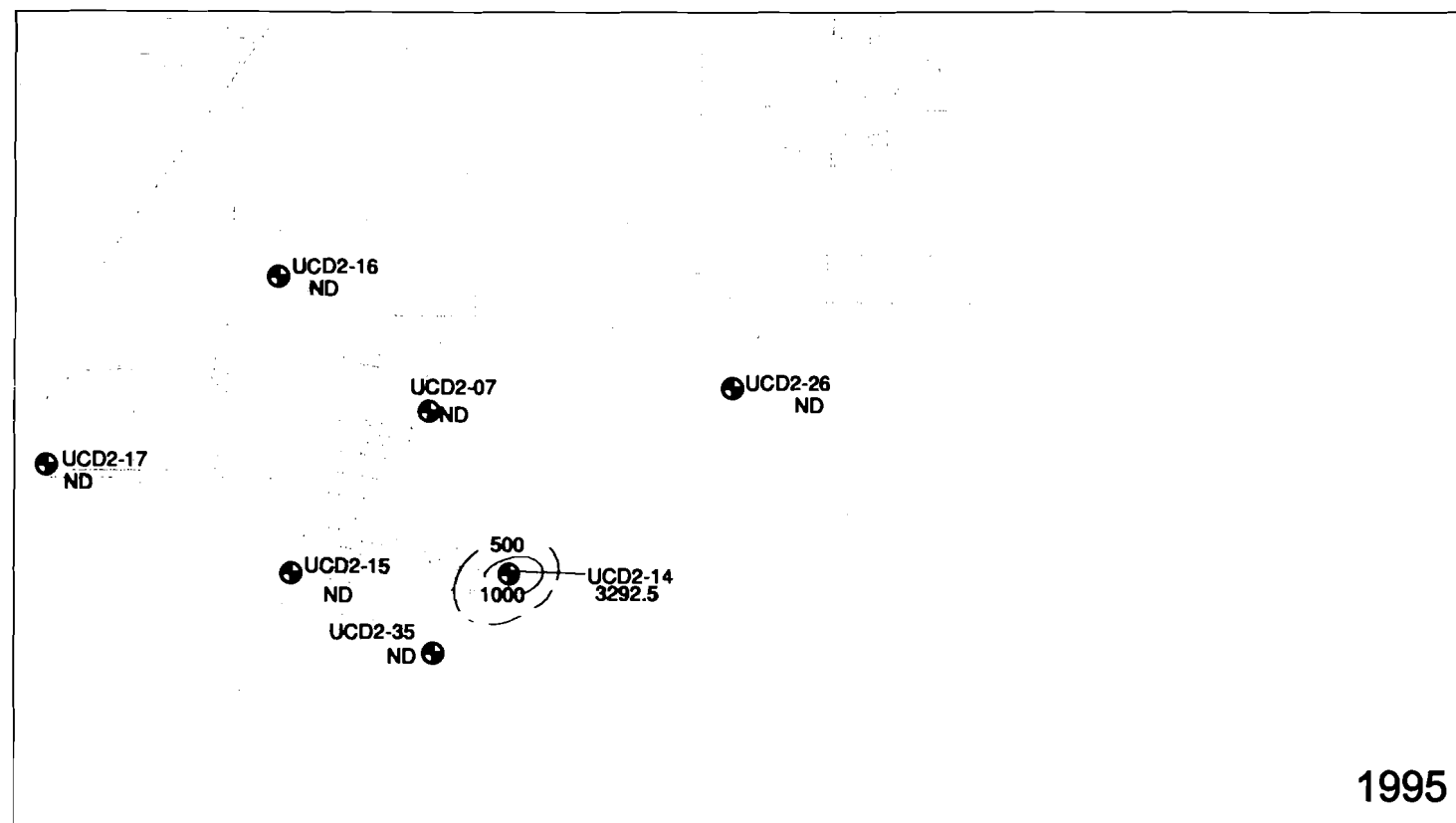


LEGEND
 ● UCD2-1 HSU-2 Monitoring Well
 ☒ EW2-1 HSU-2 Extraction Well
 --- Estimated Capture Zone, Groundwater IRA
 All results reported in ug/L
 Result represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected



LEGEND

- UCD1-11 HSU-1 Monitoring Well
- All results reported in pCi/L
- Results represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected



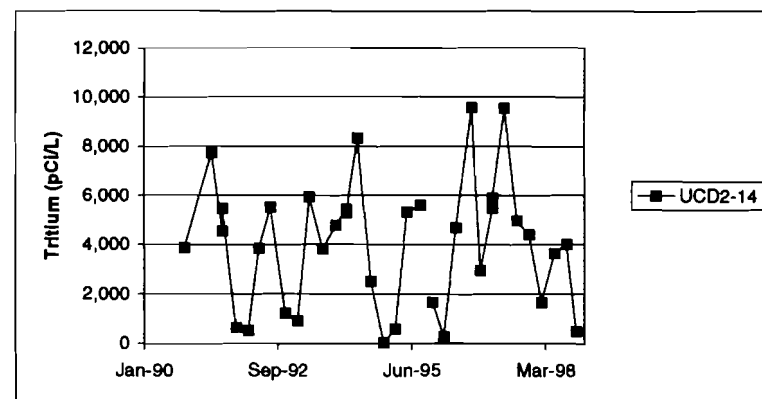
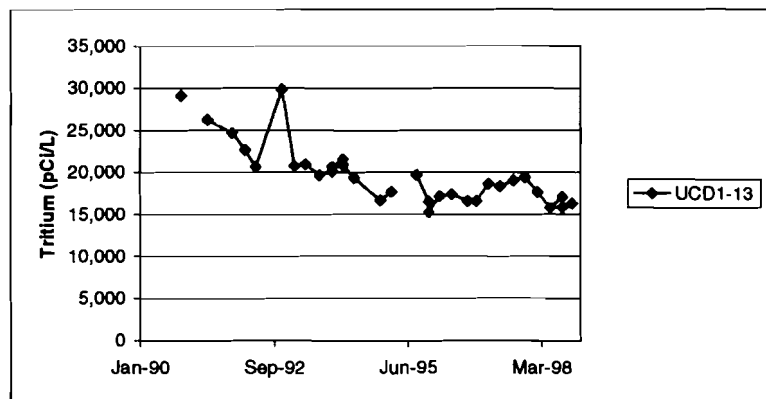
LEGEND

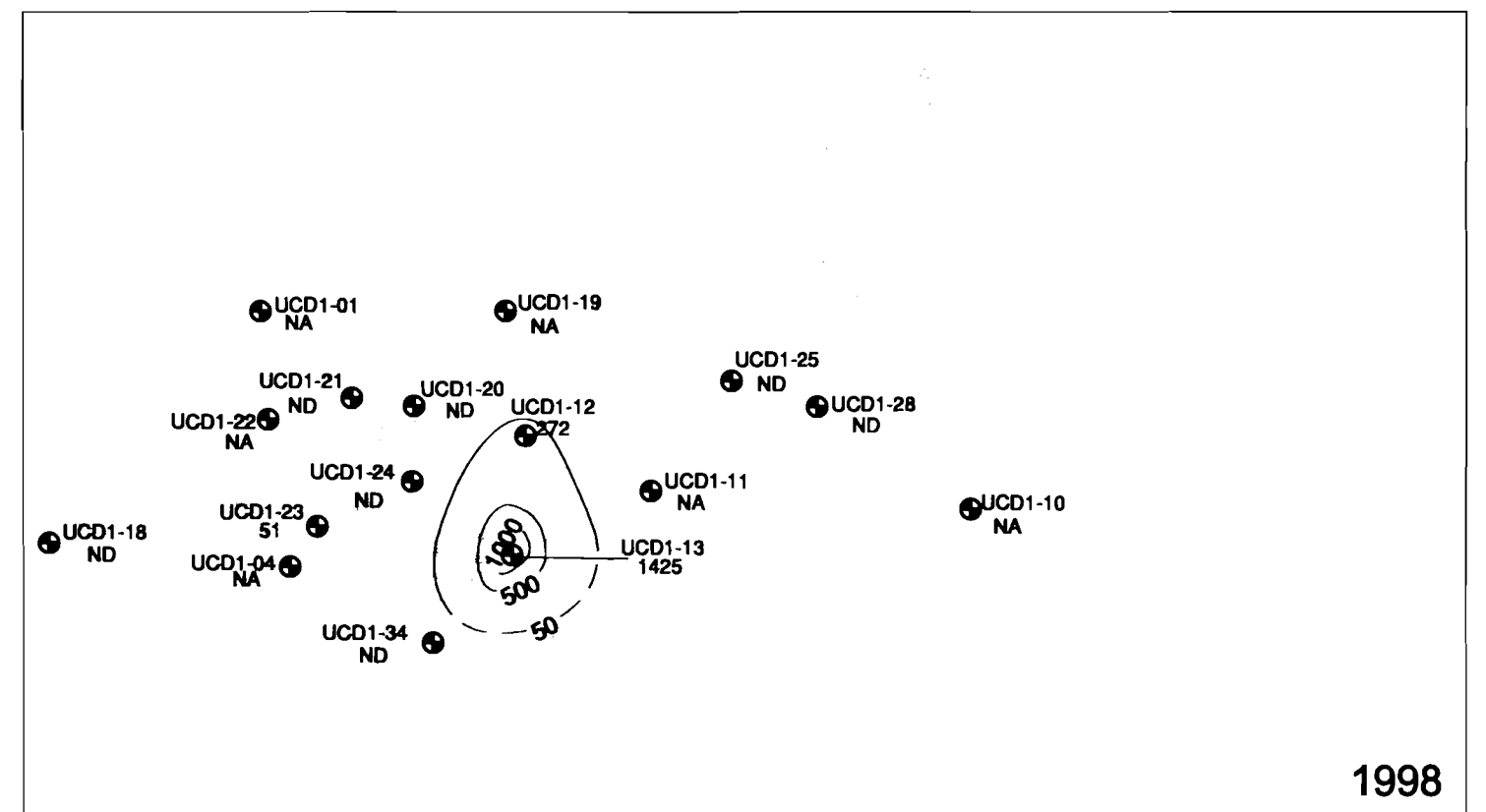
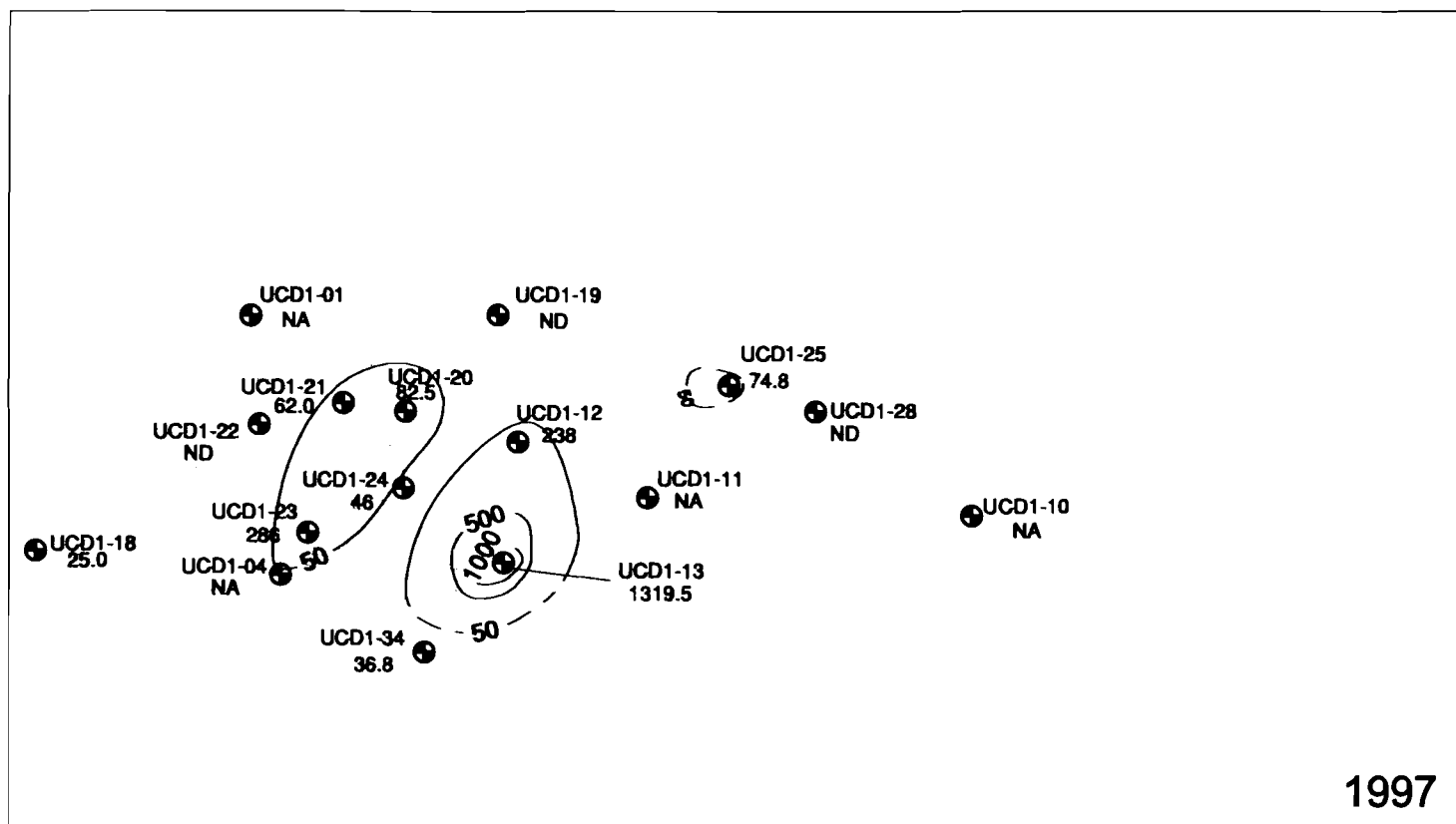
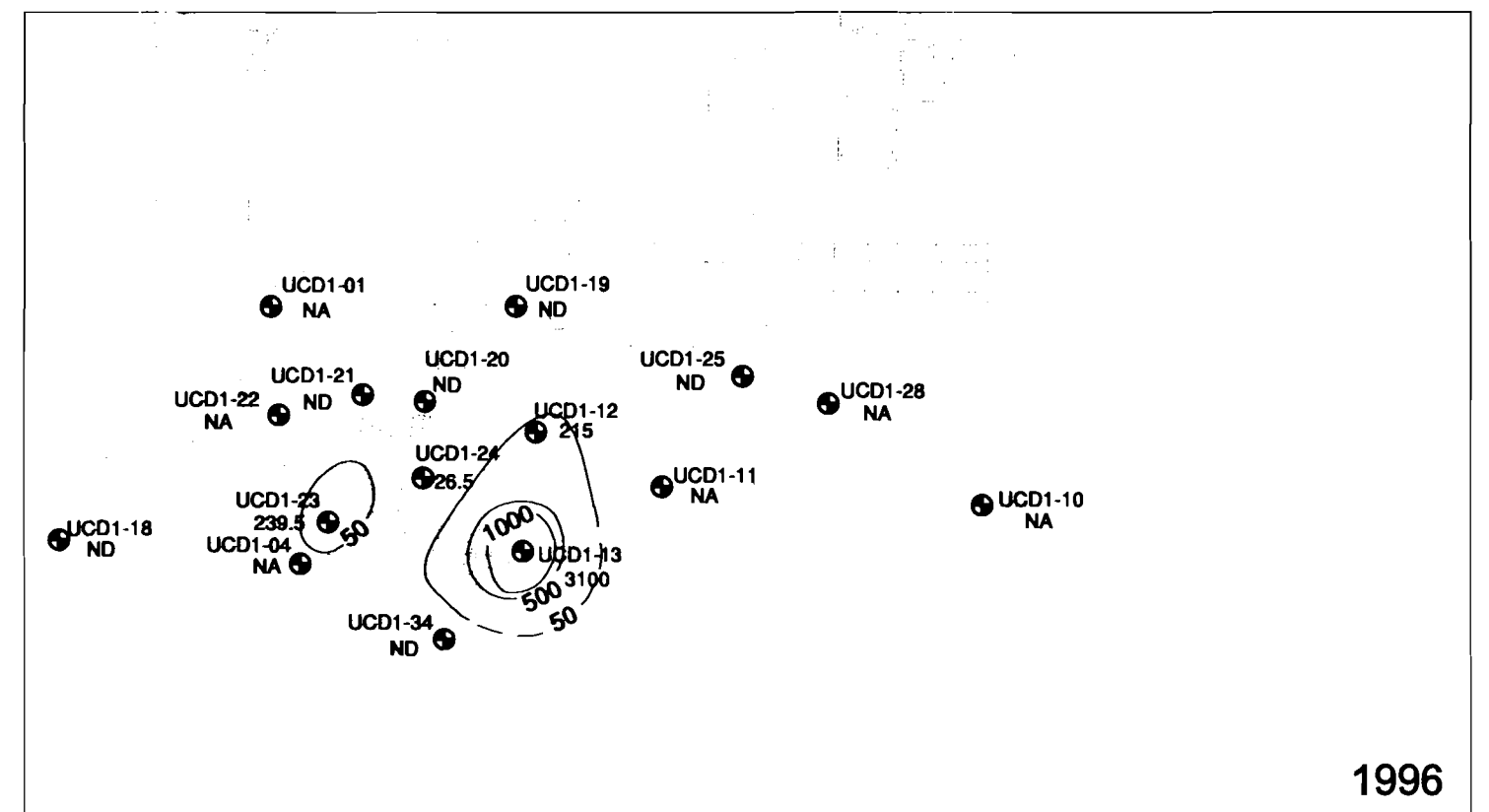
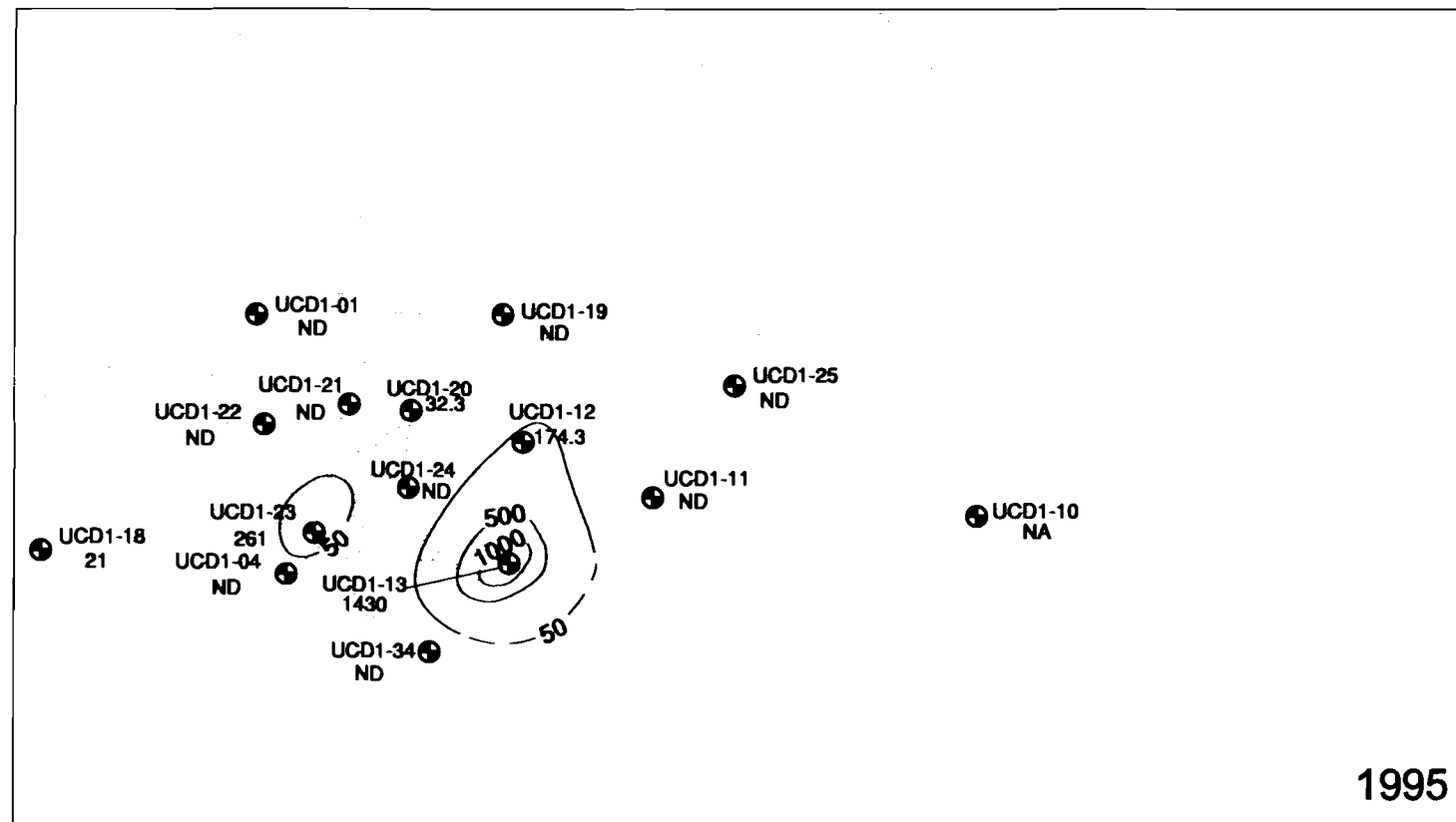
- UCD2-17 HSU-2 Monitoring Well
- All results reported in pCi/L
- Results represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected

* Not confirmed by result in UCD2-26

TRITIUM ISOCONCENTRATION CONTOURS IN HSU-2, 1995 Through 1998

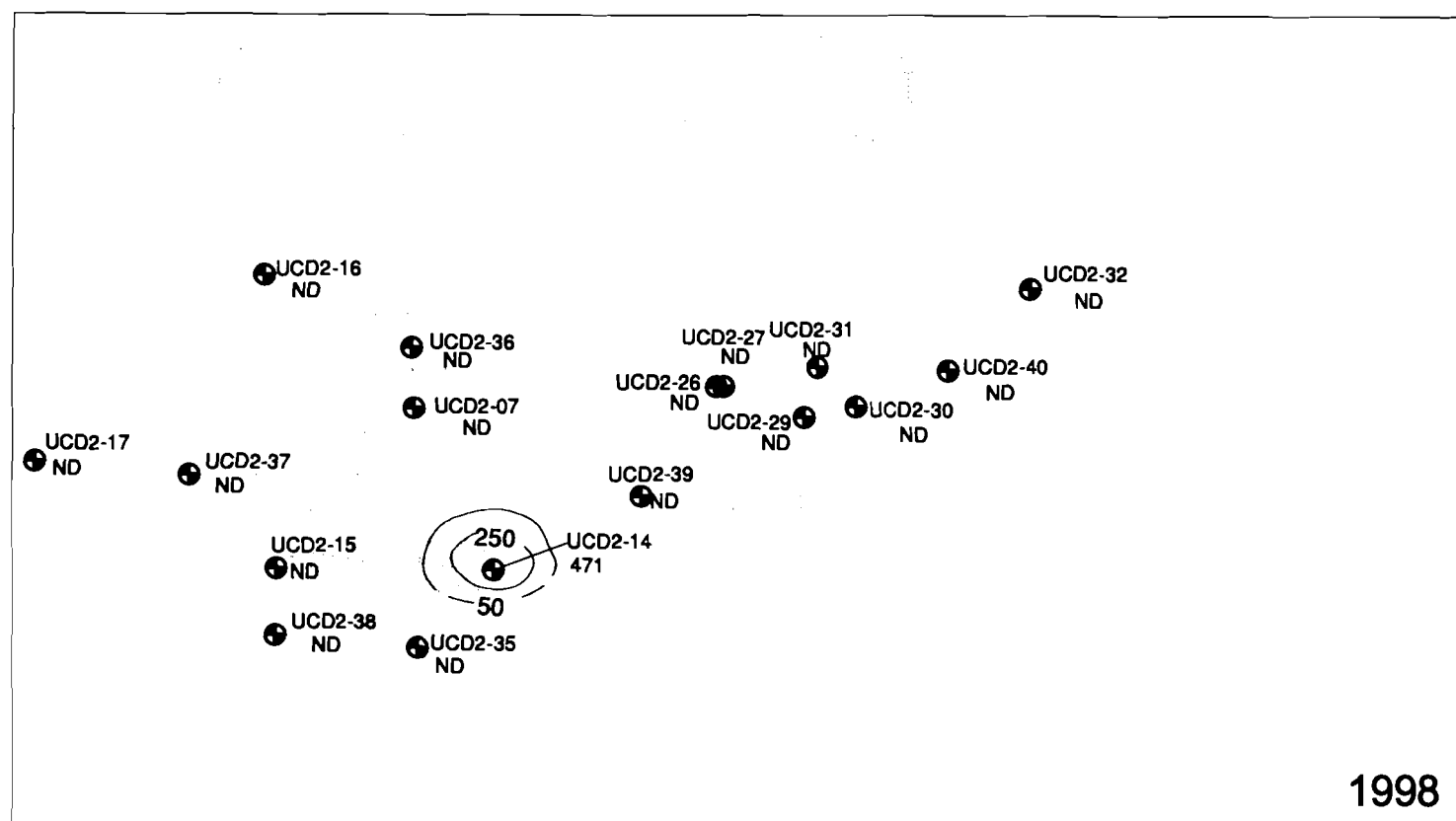
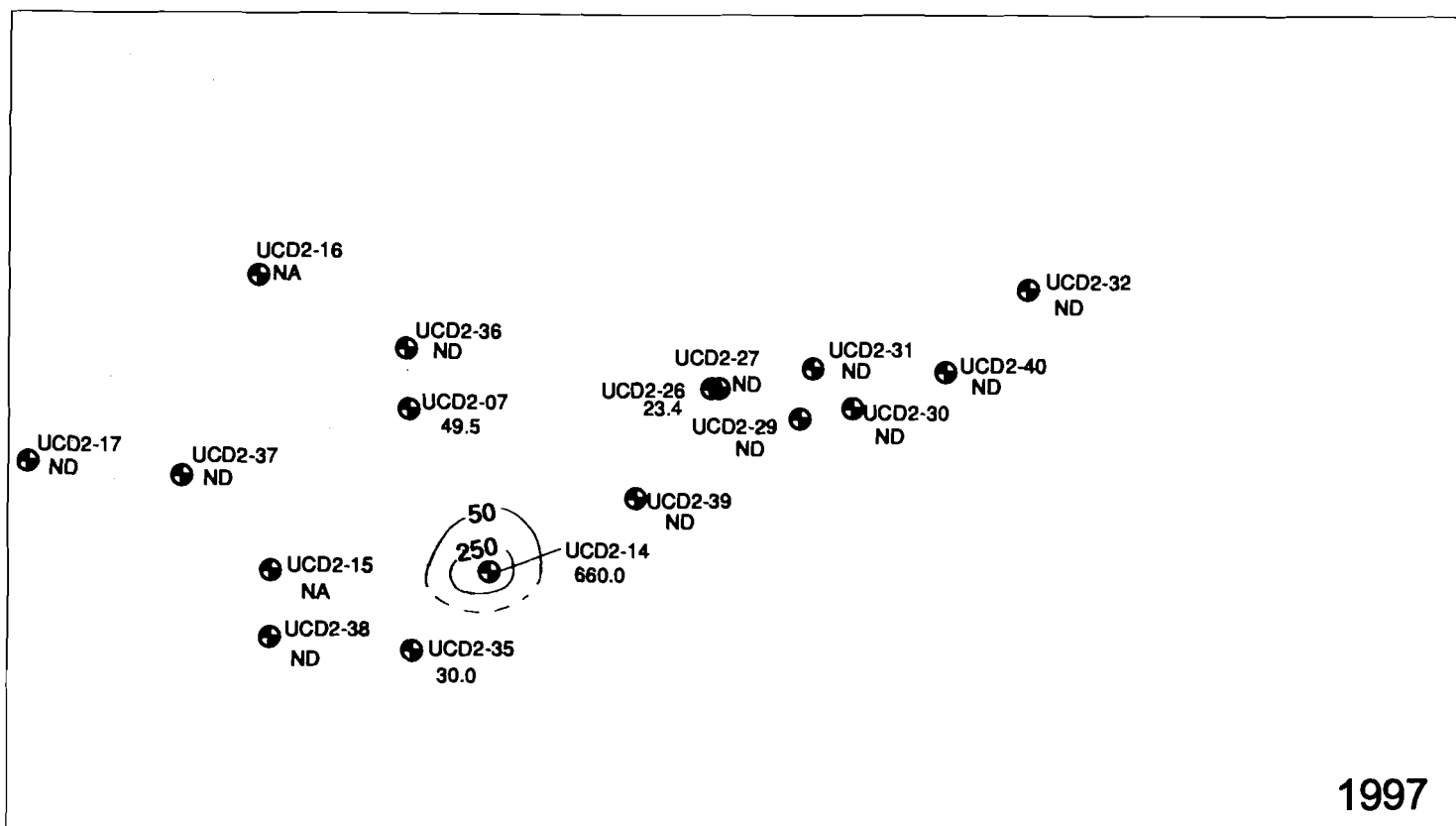
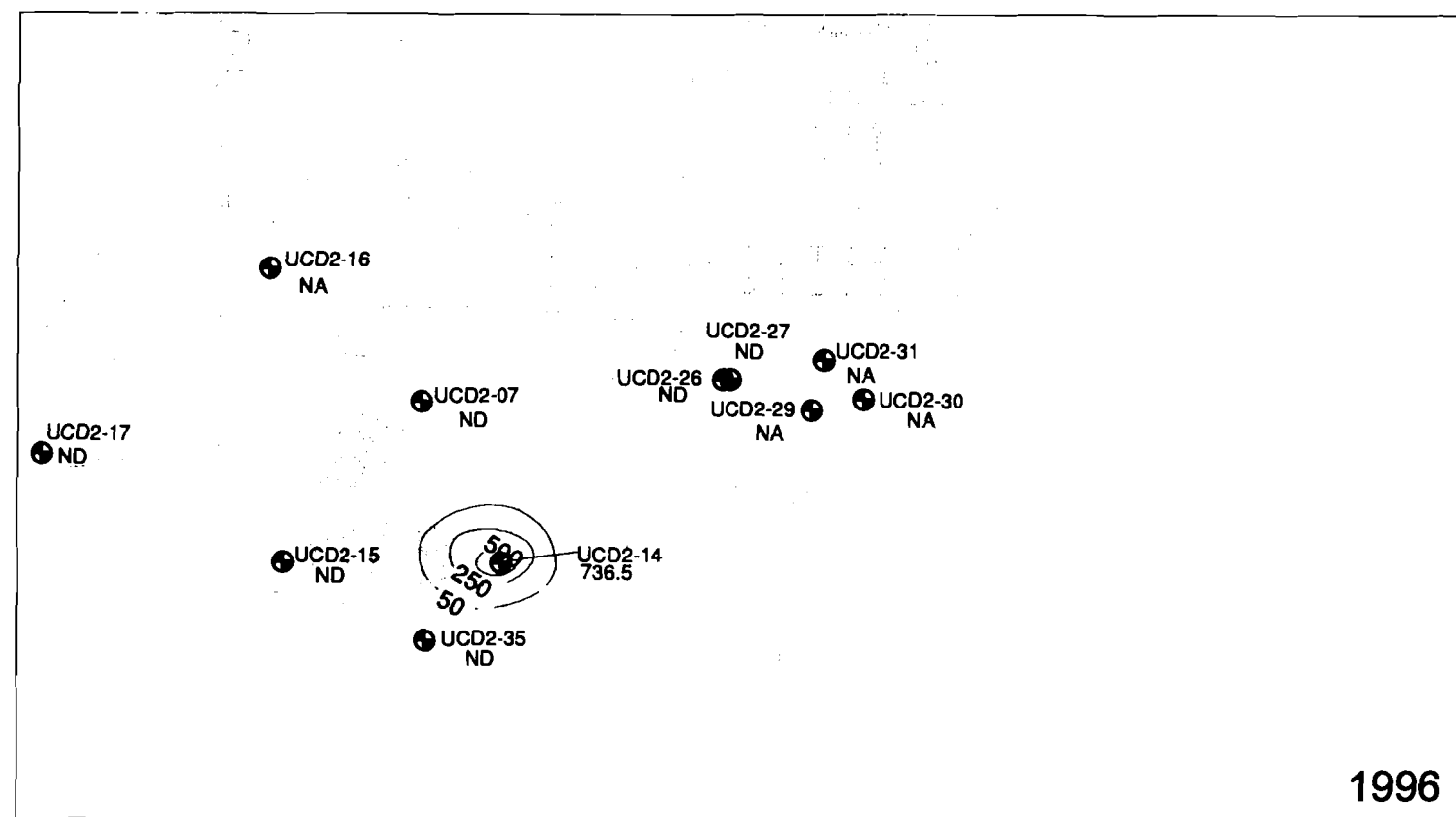
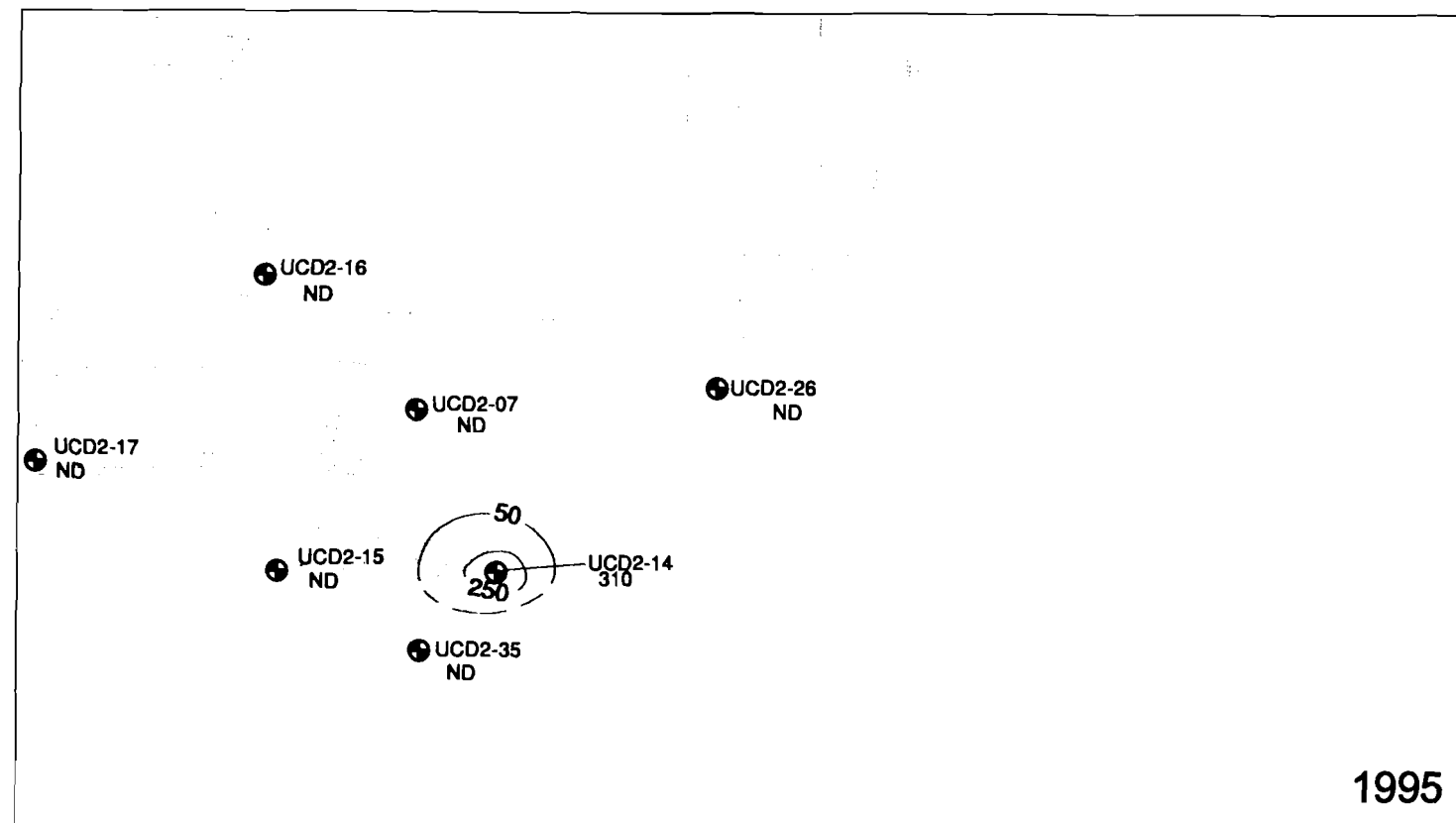
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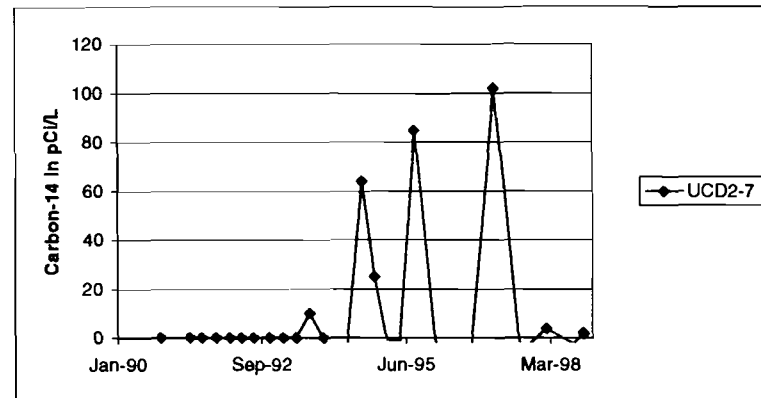
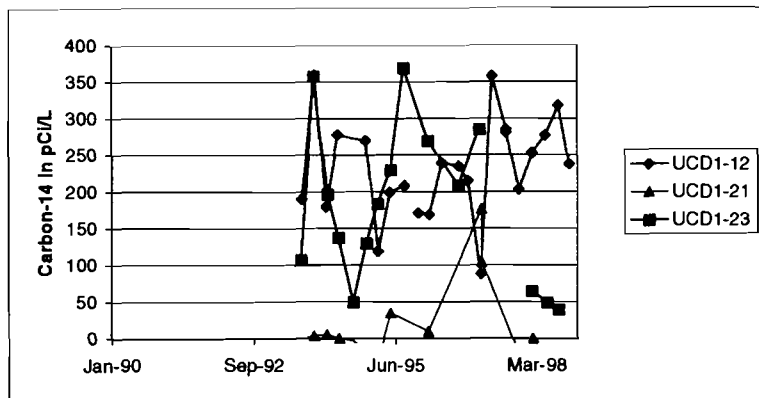
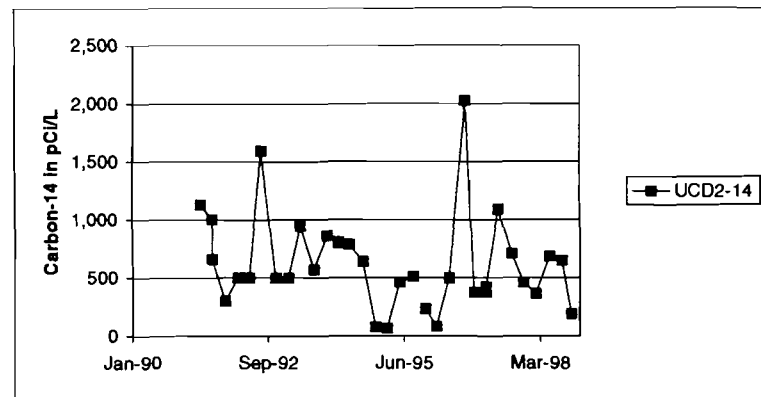
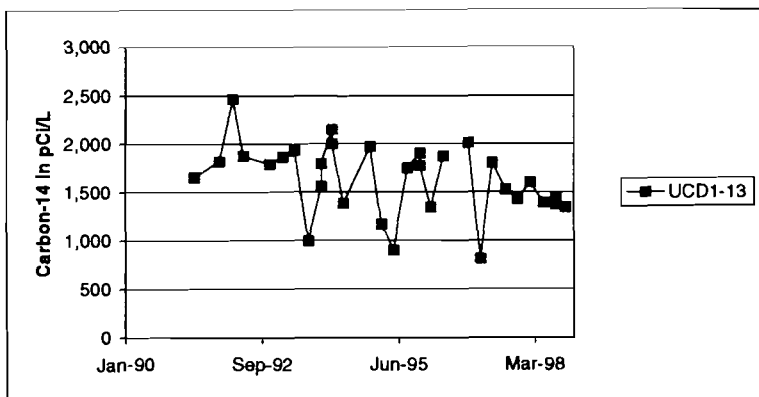
LEGEND

● UCD1-11 HSU-1 Monitoring Well
 All results reported in pCi/L
 Results represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected

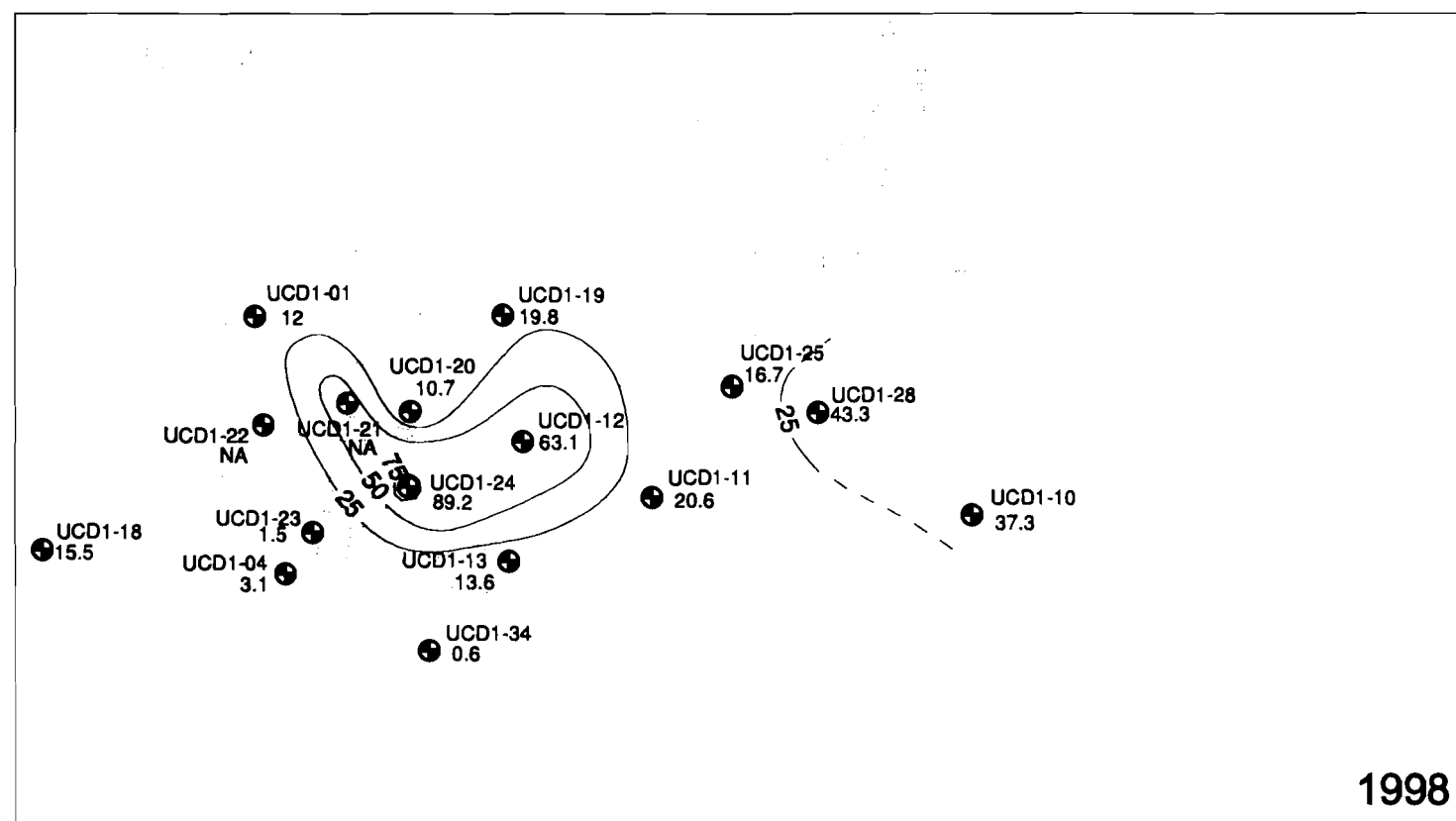
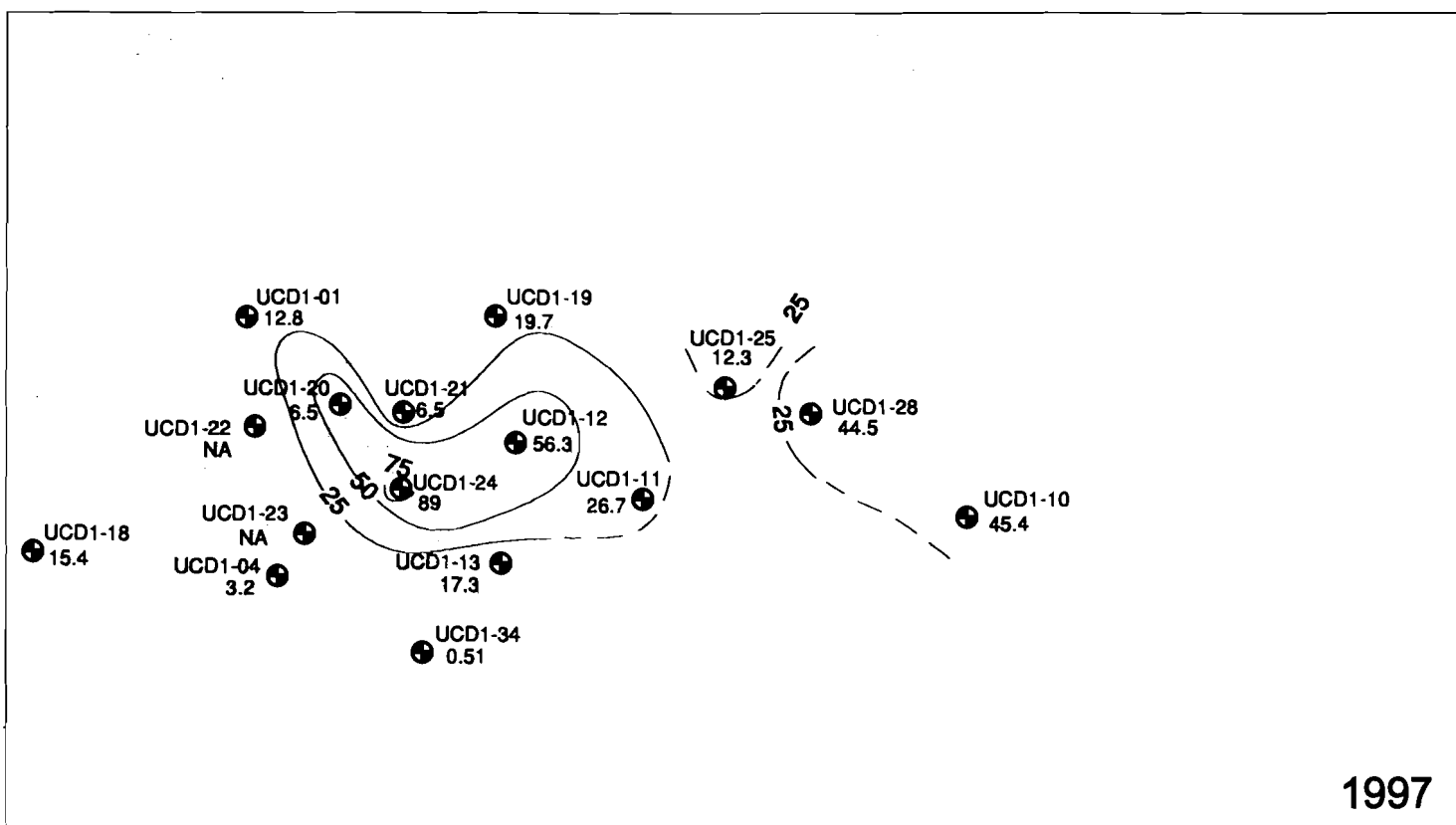
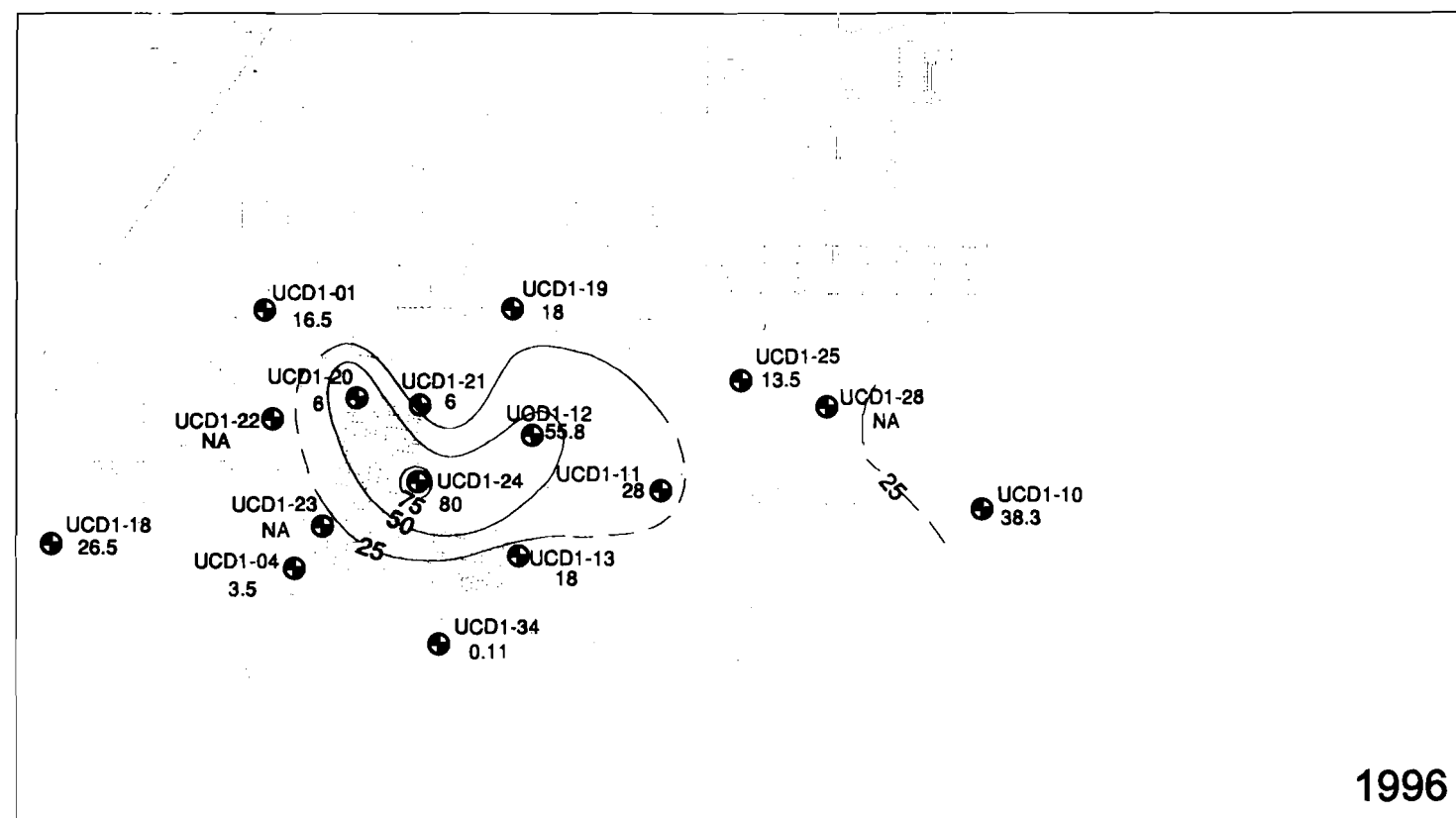
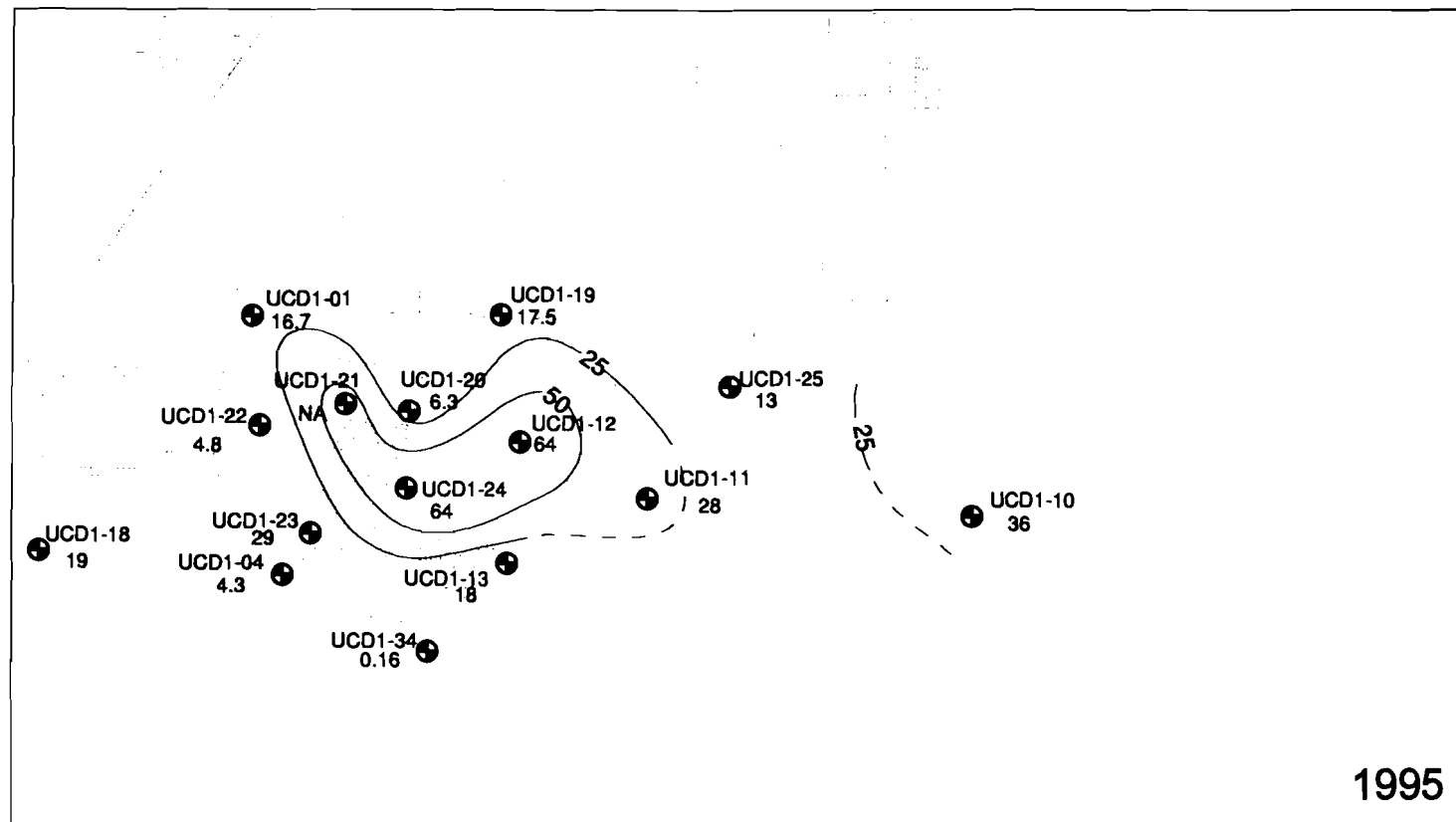


LEGEND

- UCD2-17 HSU-2 Monitoring Well
- All results reported in pCi/L
- Results represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected



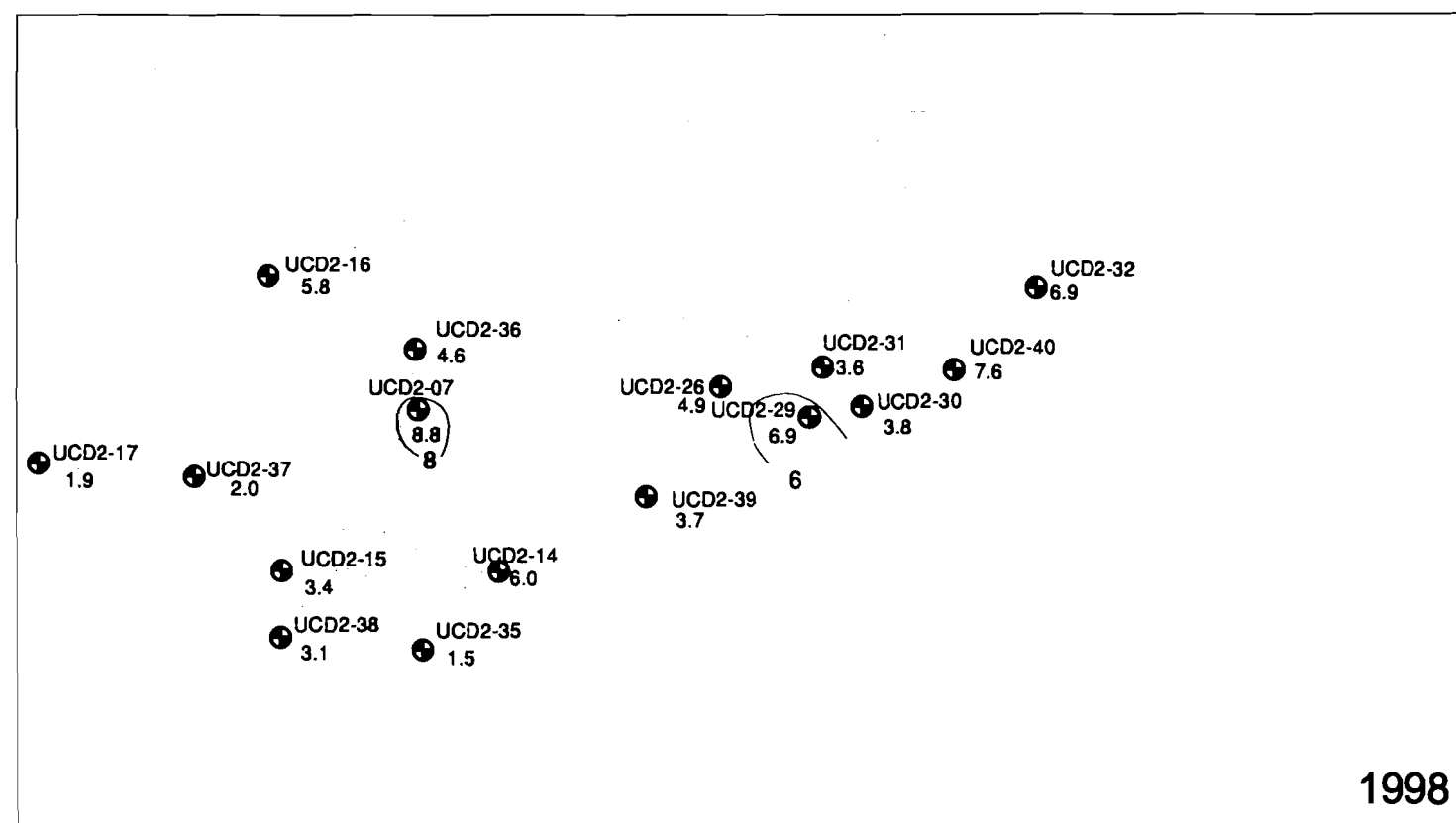
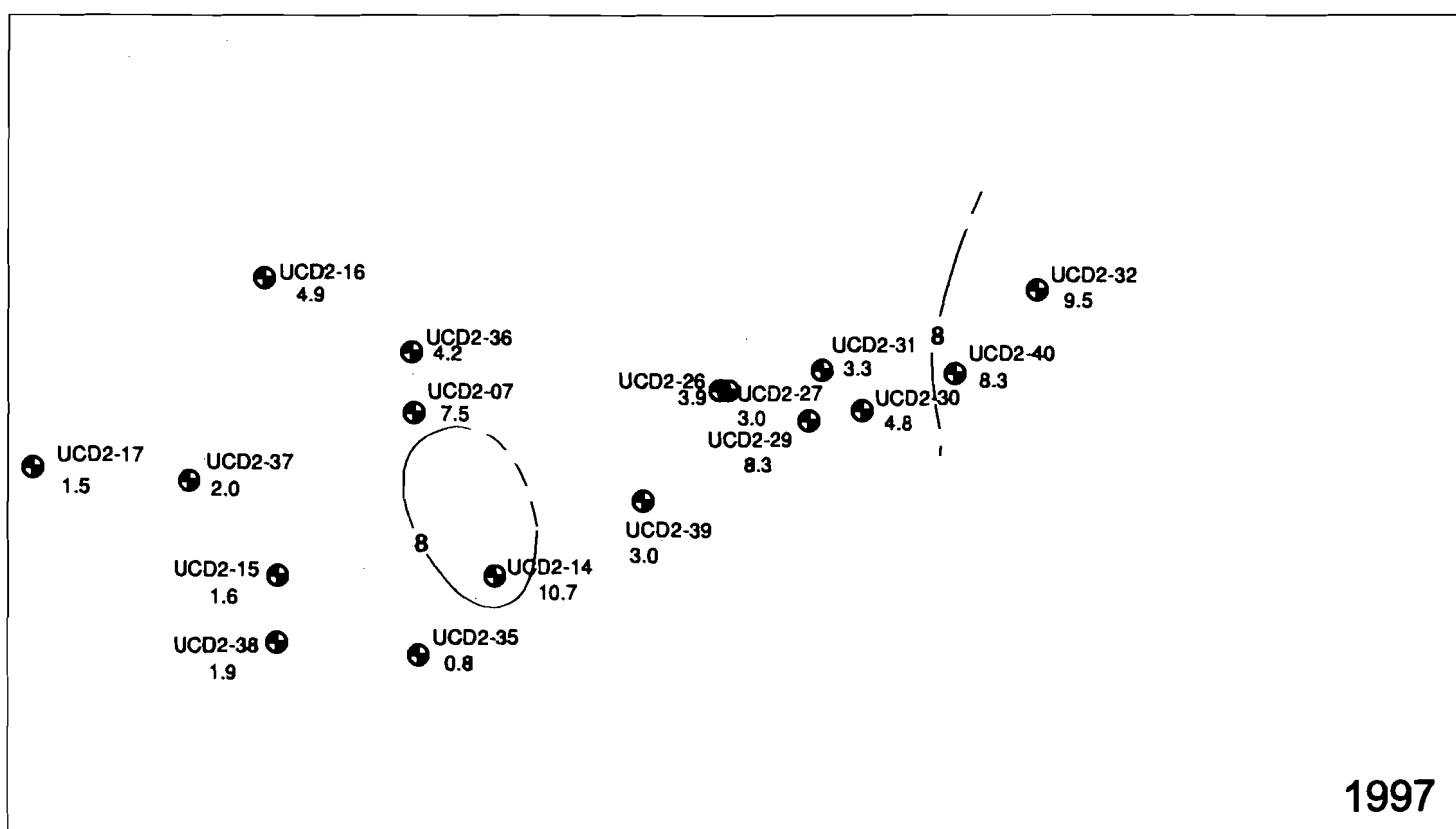
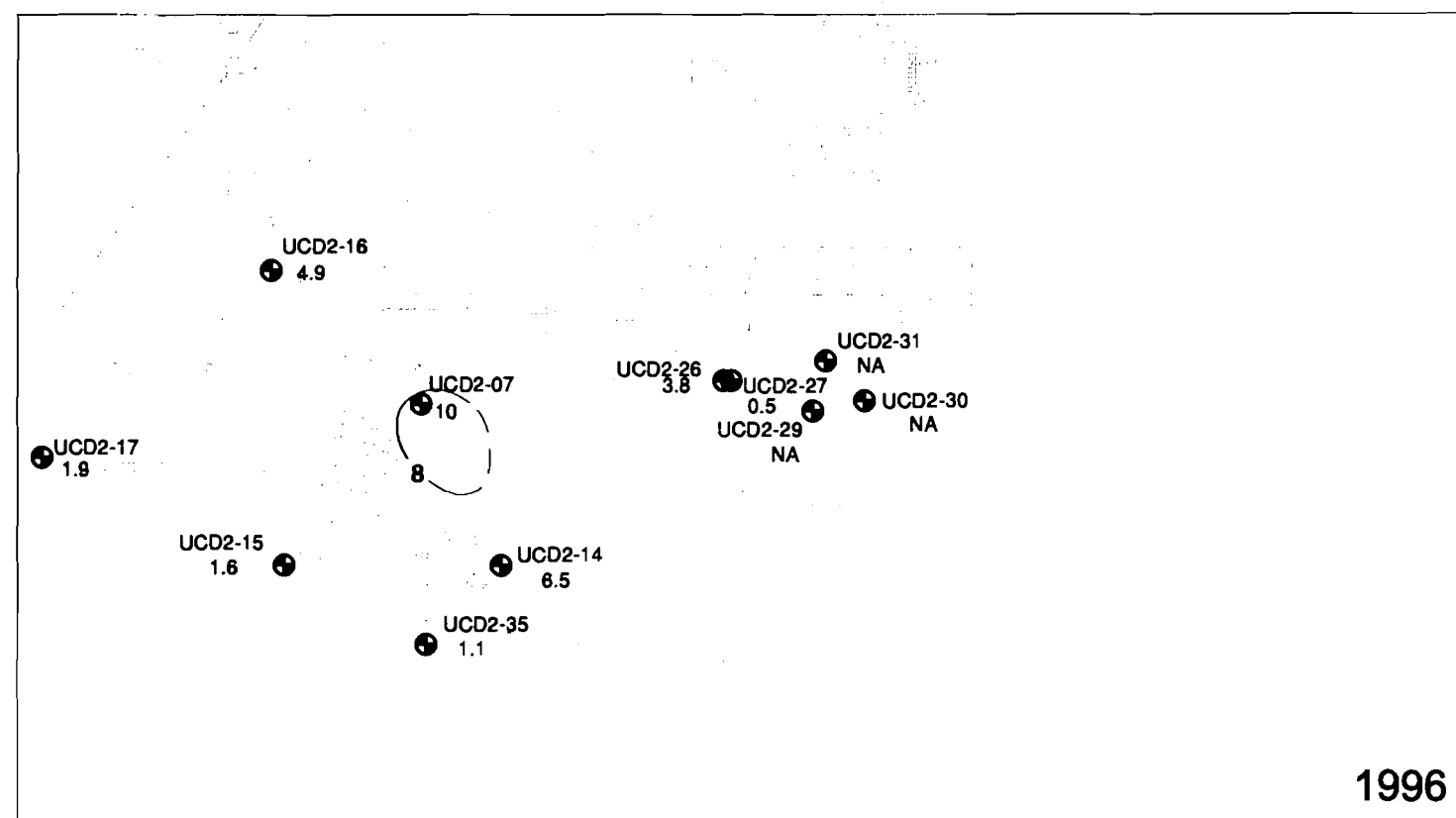
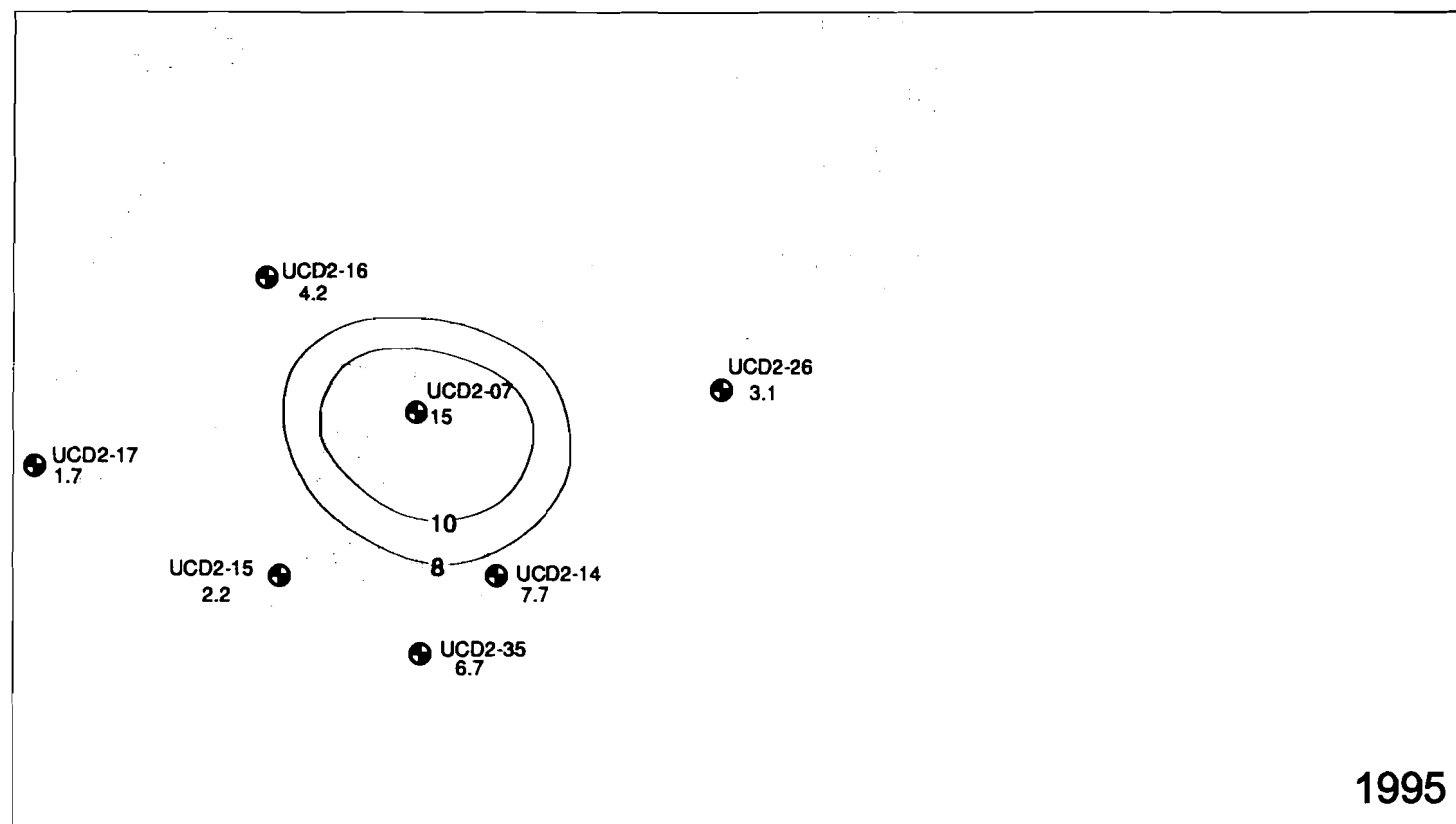
PLOTS OF CARBON-14 VERSUS TIME IN SELECTED HSU-1 AND HSU-2 WELLS



LEGEND

- UCD1-11 HSU-1 Monitoring Well
- All results reported in ug/L
- Results represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected

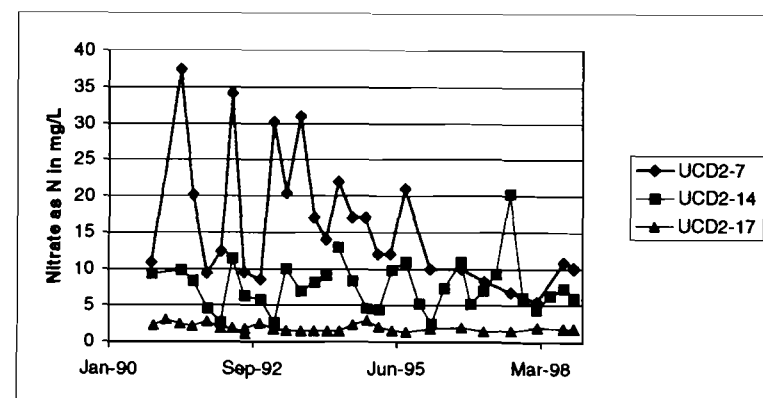
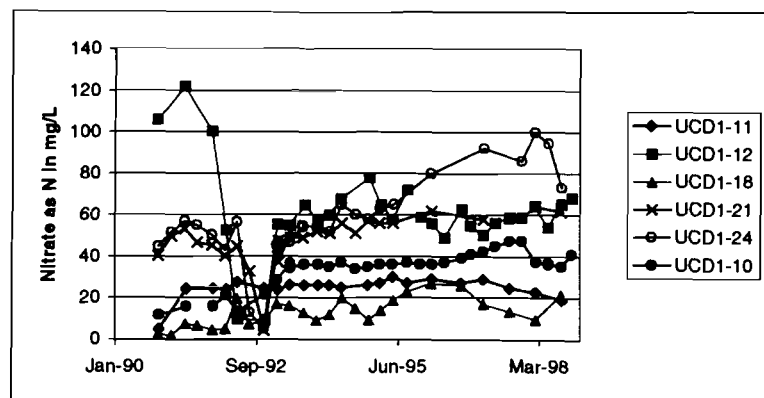
NITRATE AS N ISOCONCENTRATION CONTOURS IN HSU-1, 1995 Through 1998



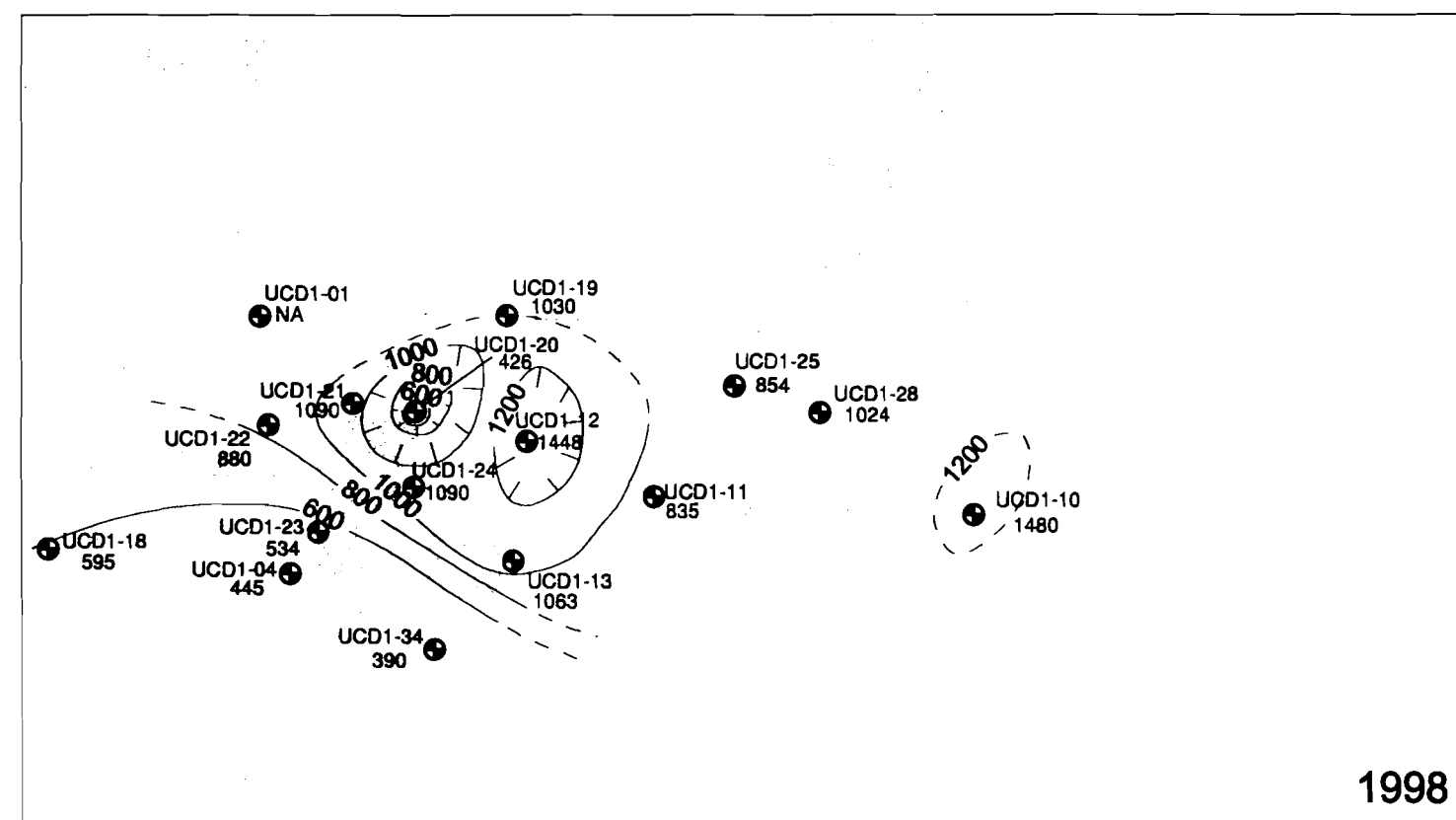
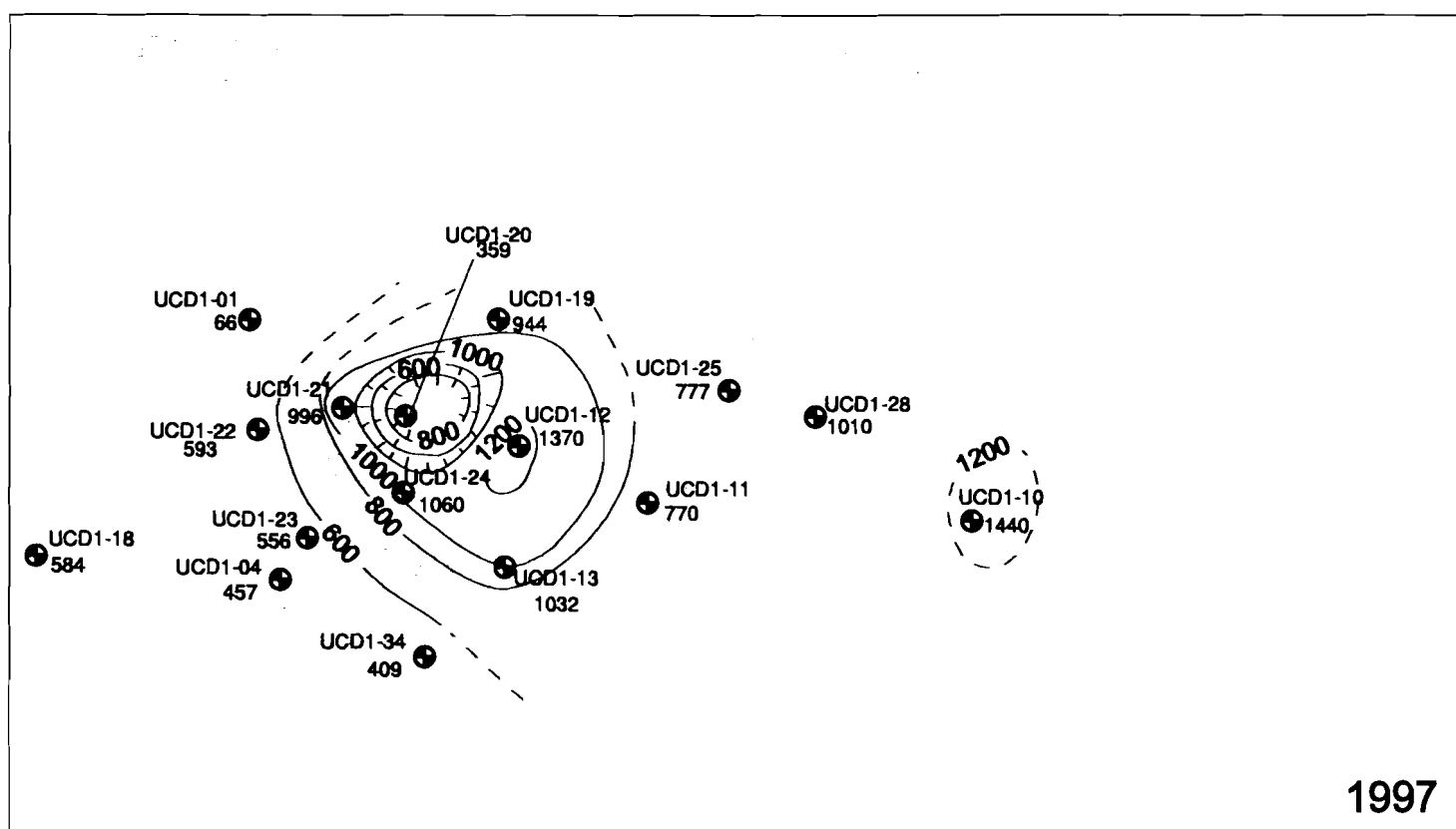
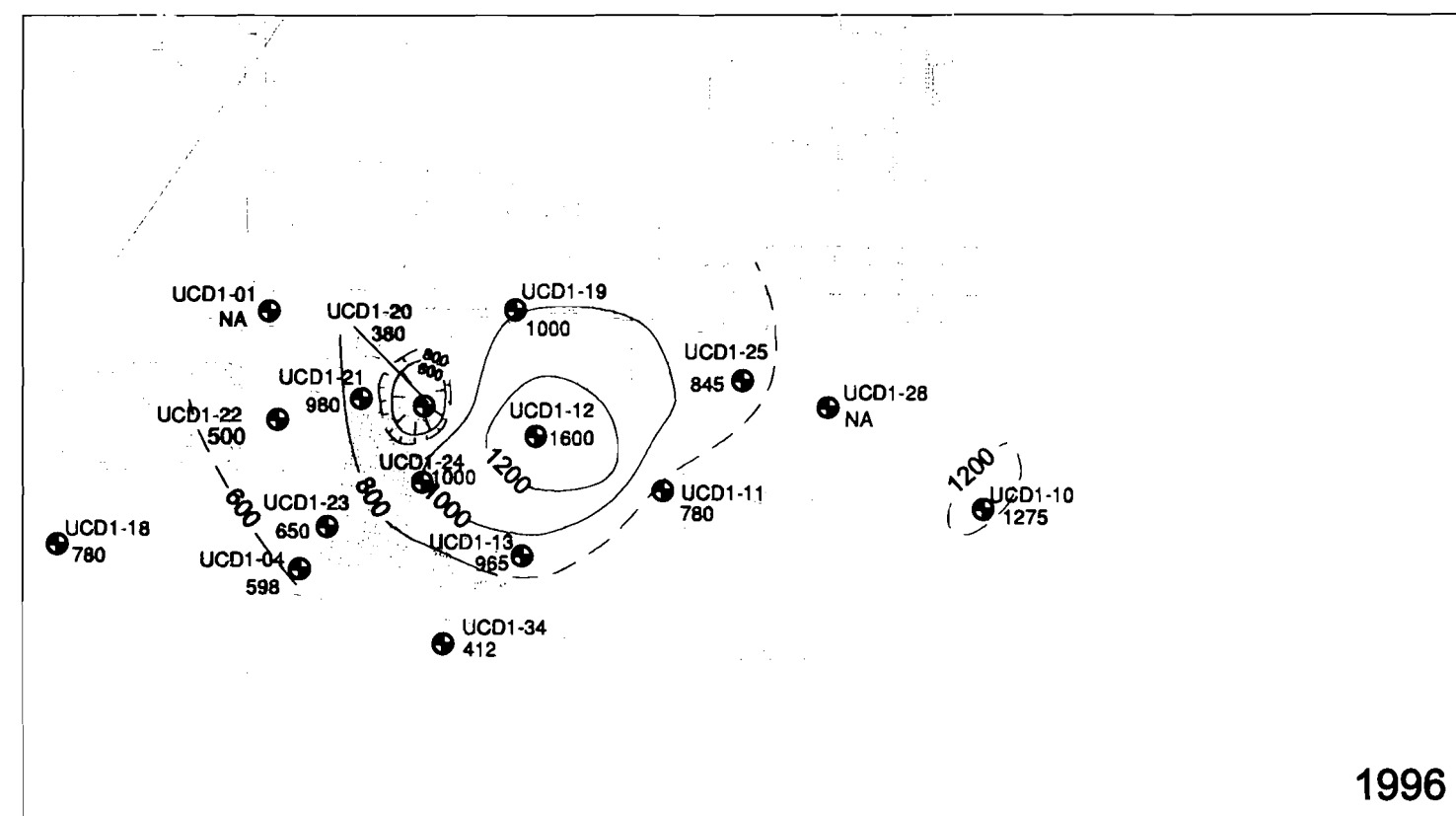
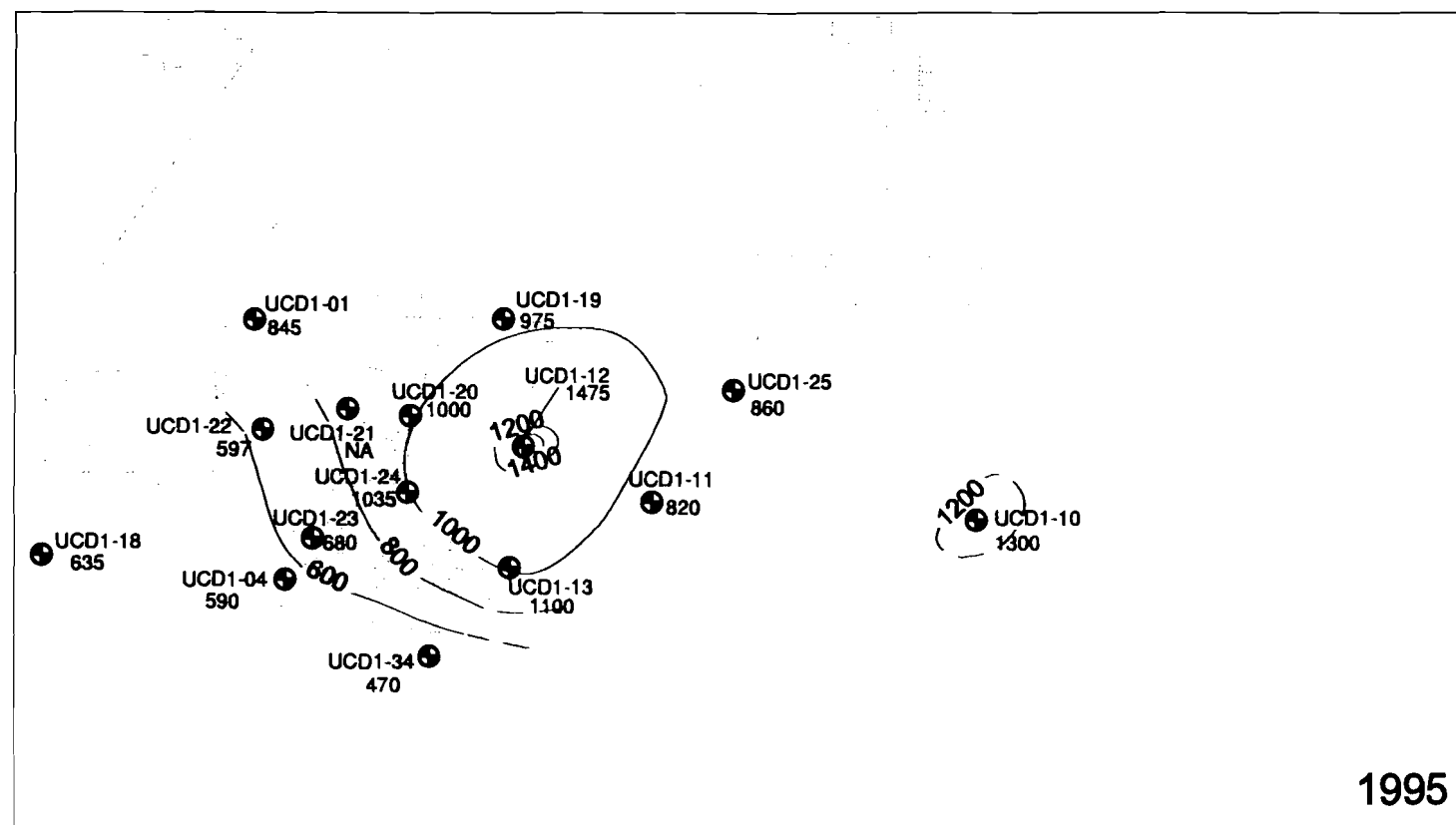
LEGEND

- UCD2-17 HSU-2 Monitoring Well
- All results reported in ug/L
- Result represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected

NITRATE AS N ISOCONCENTRATION CONTOURS IN HSU-2, 1995 Through 1998
 1998 Annual Water Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California
 Figure 17

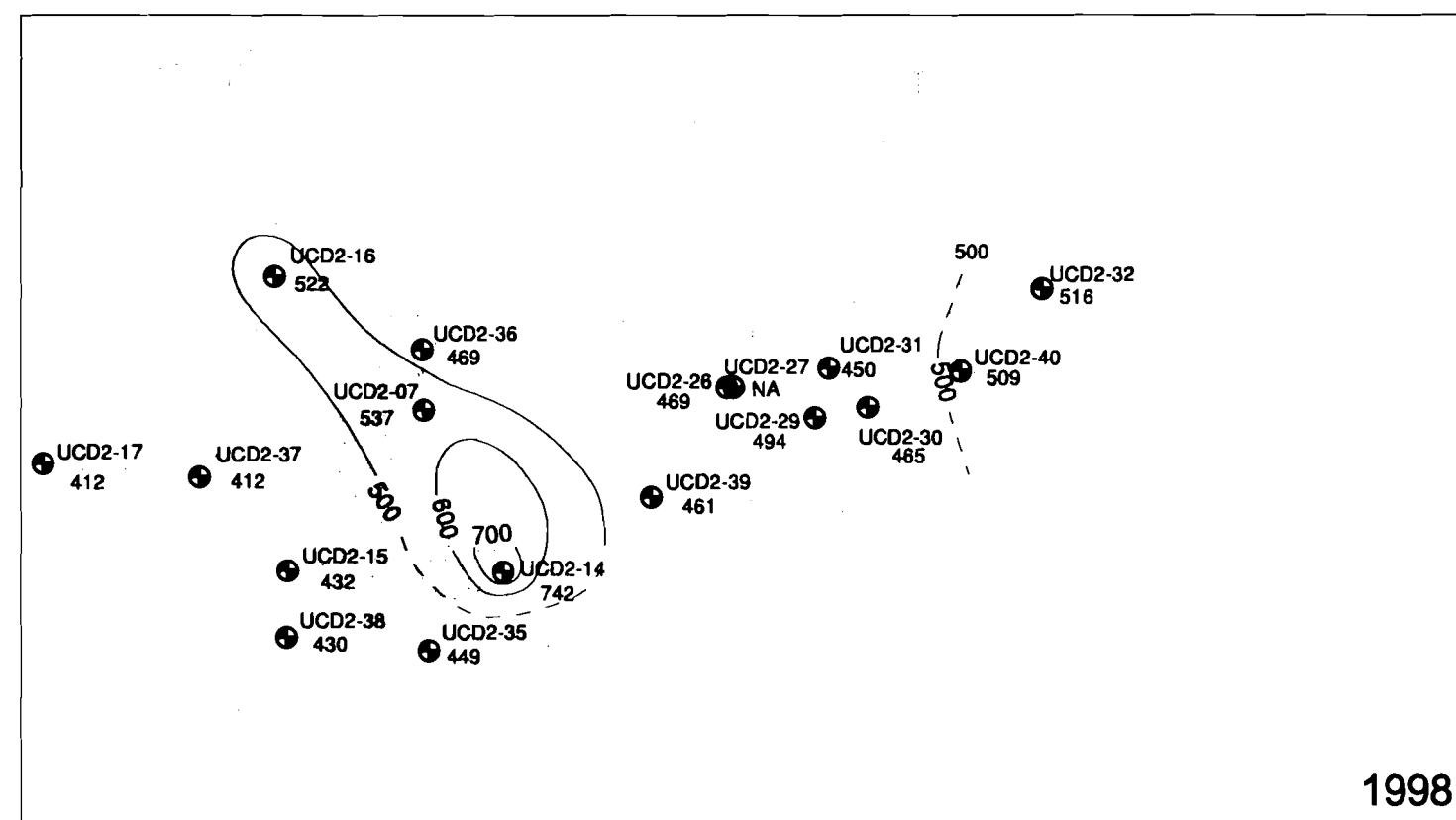
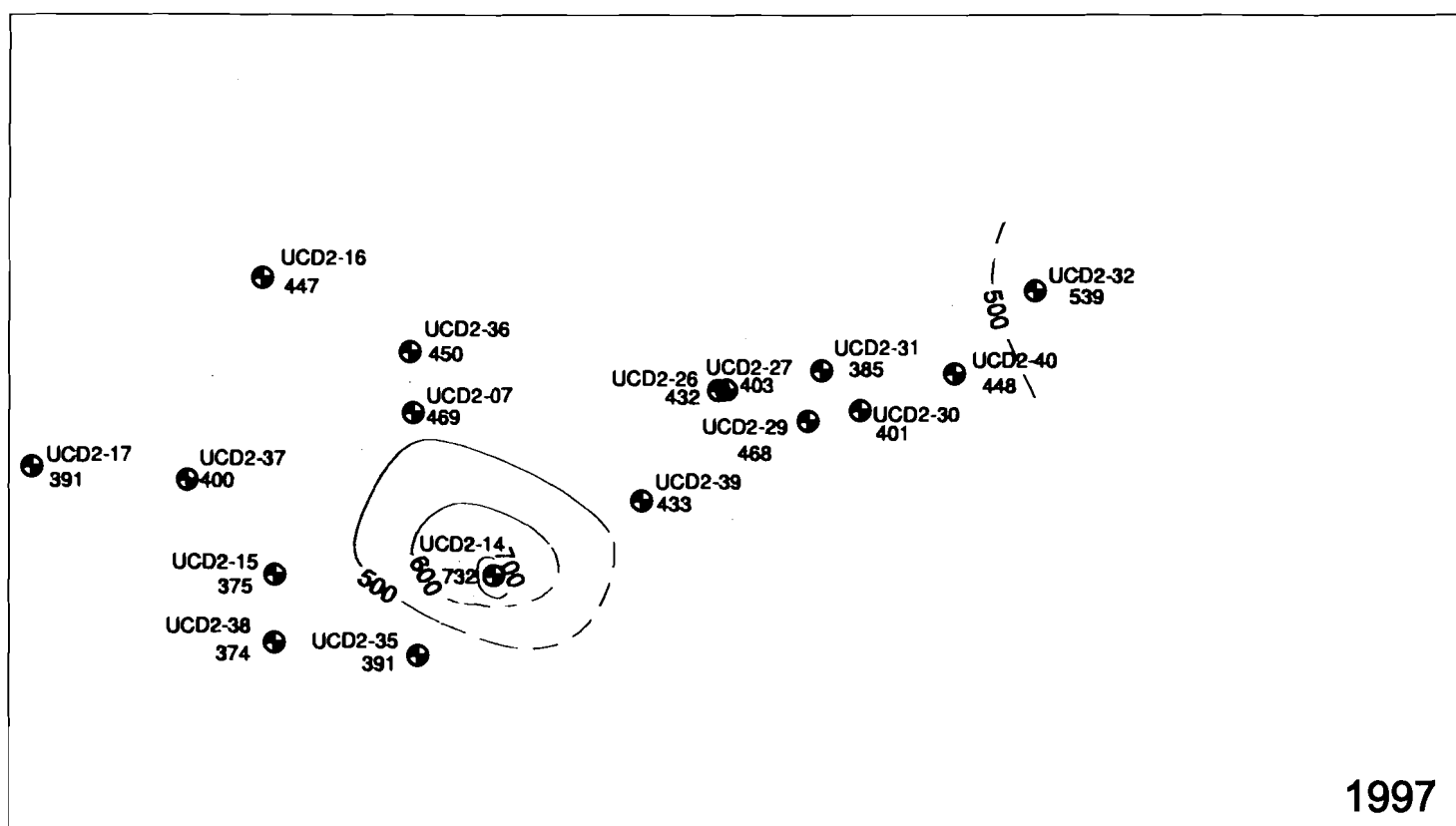
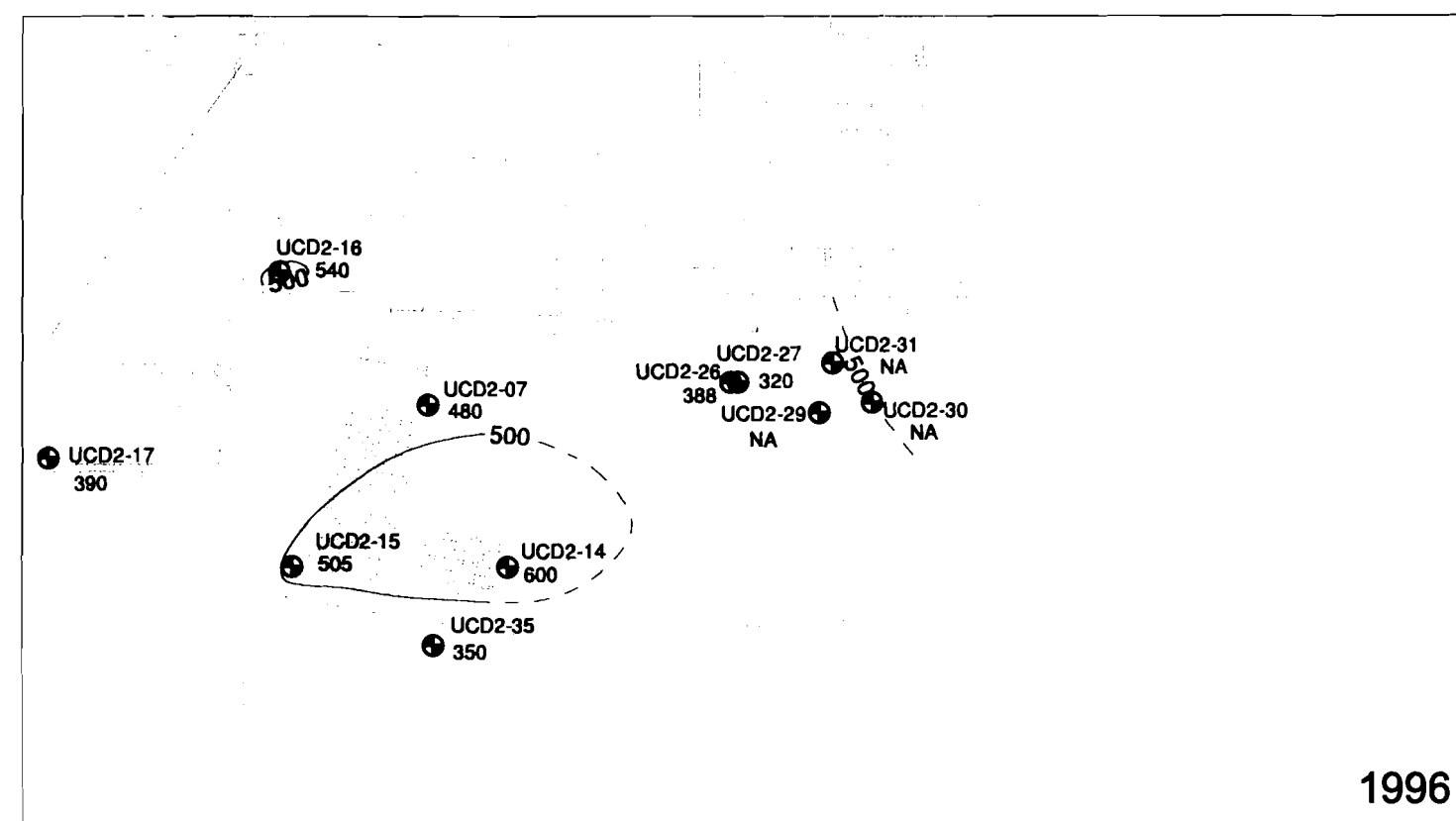
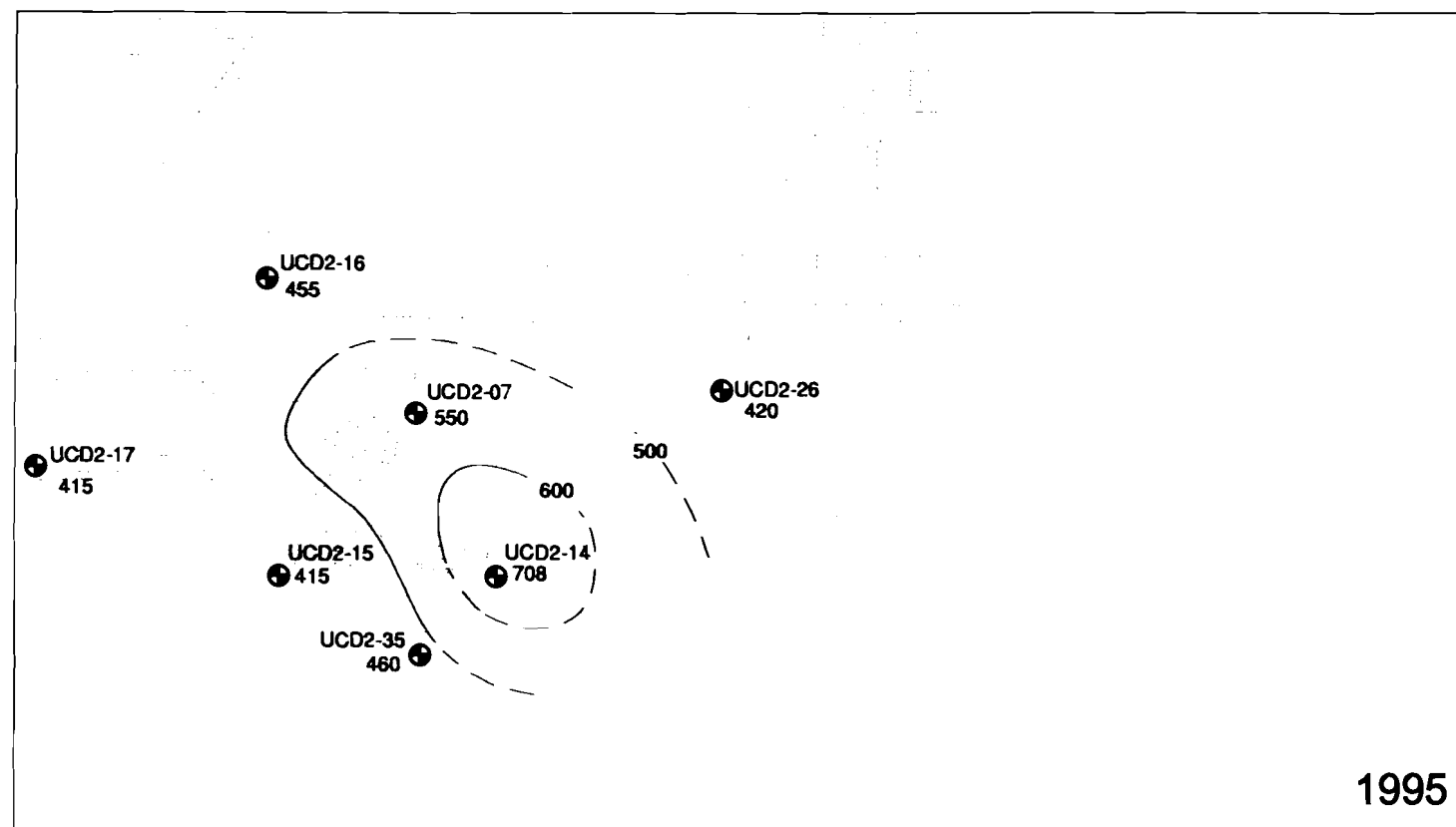


PLOTS OF NITRATE AS N VERSUS TIME IN SELECTED HSU-1 AND HSU-2 WELLS



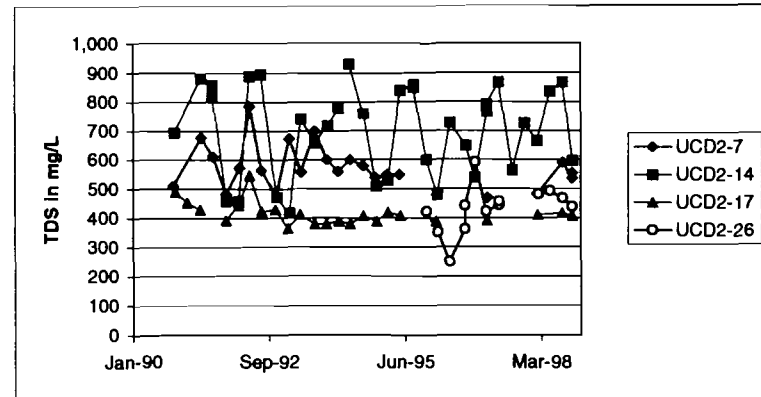
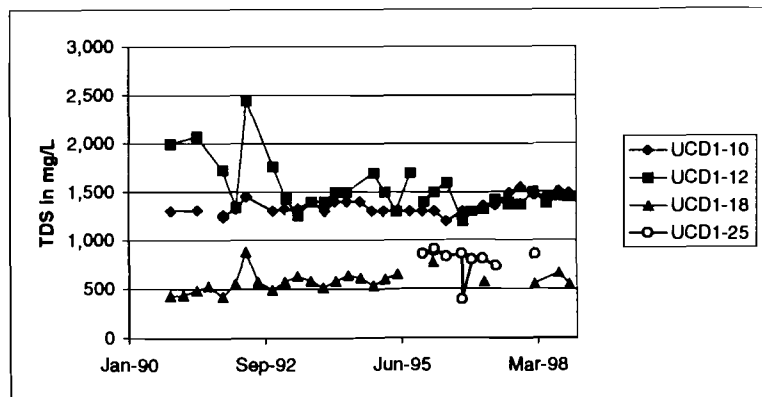
LEGEND
 ● UCD1-11 HSU-1 Monitoring Well
 All results reported in ug/L
 Results represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected

TDS ISOCONCENTRATION CONTOURS IN HSU-1, 1995 Through 1998
 1998 Annual Water Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California
 Figure 19



LEGEND

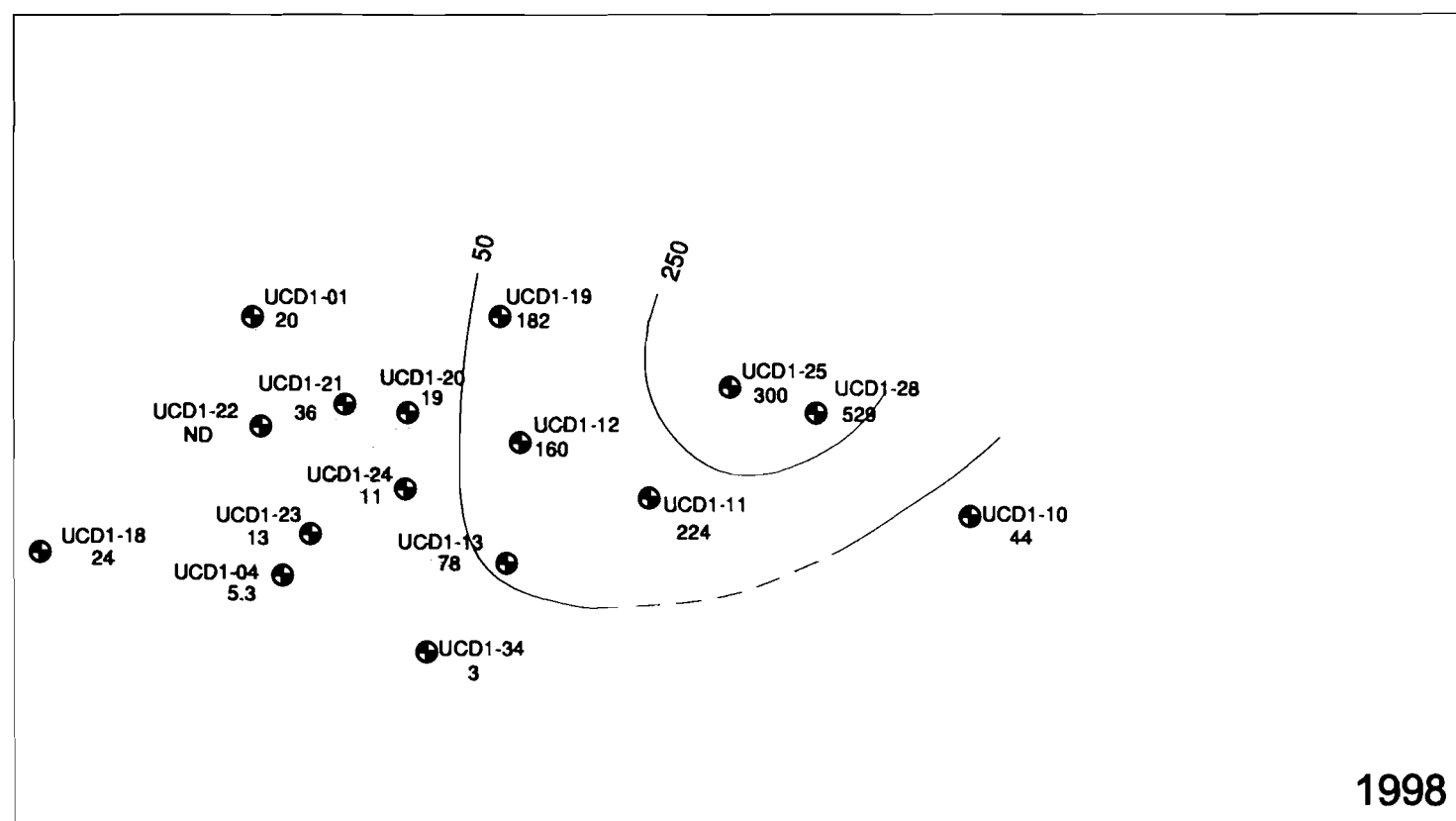
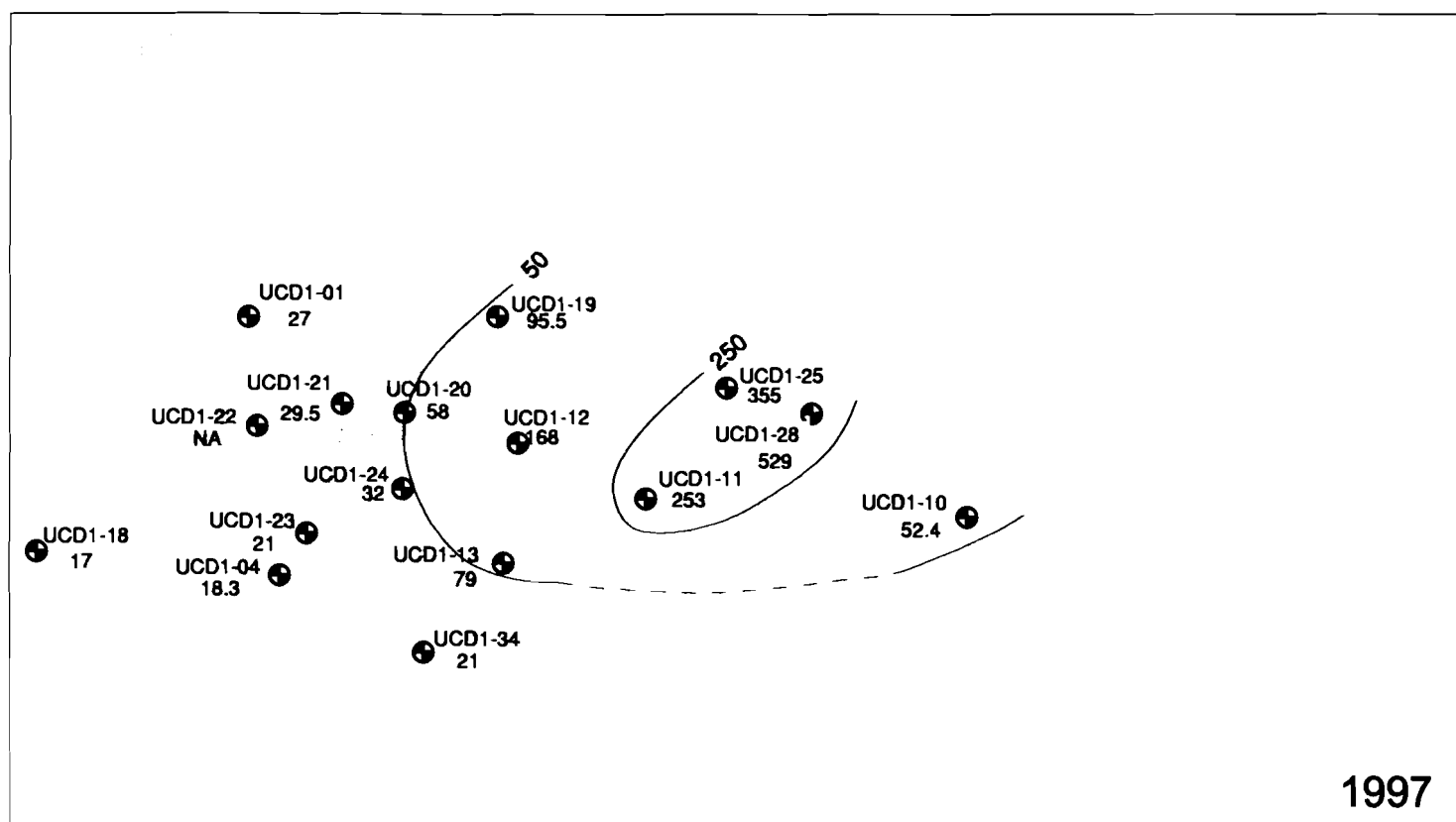
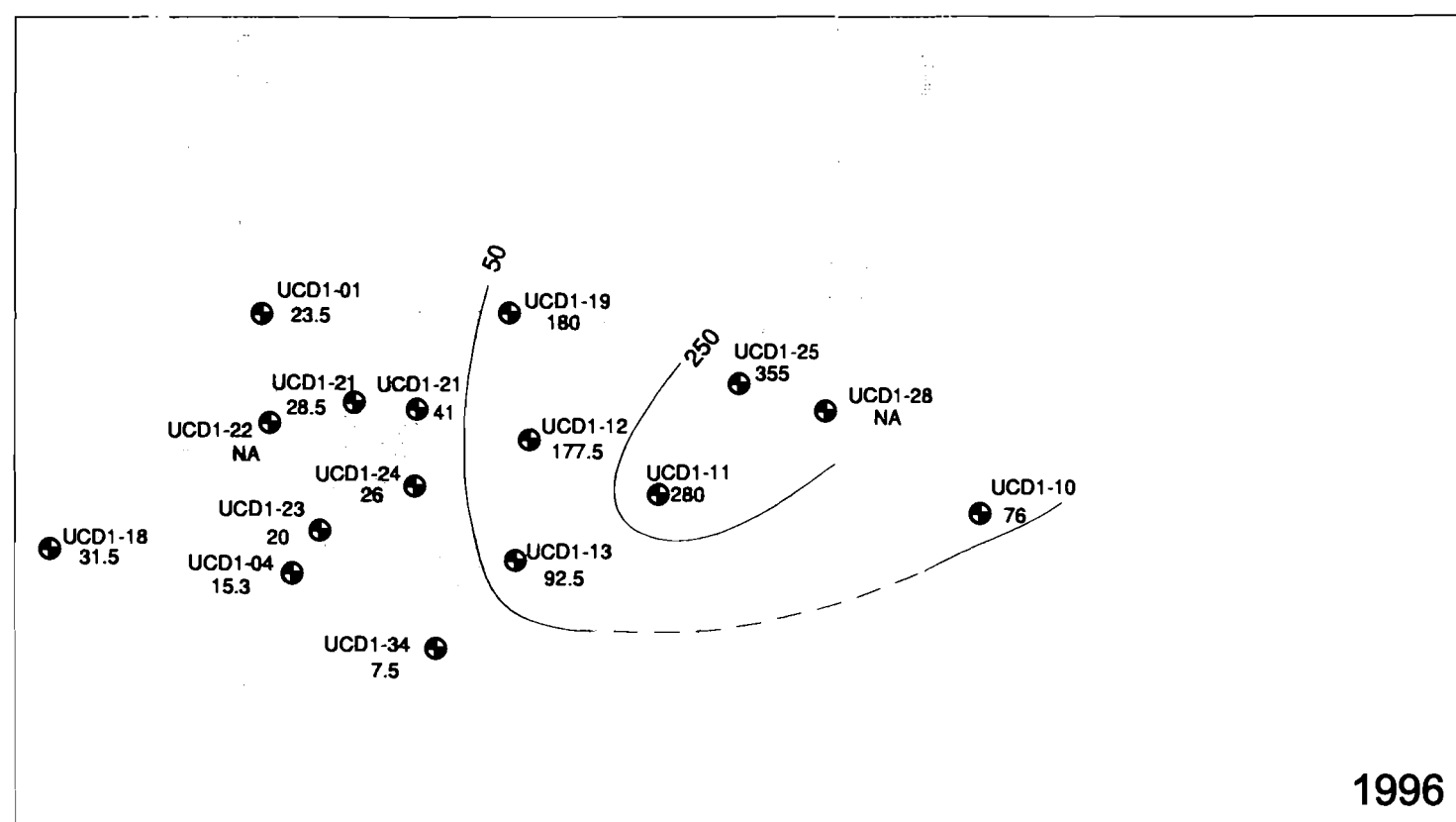
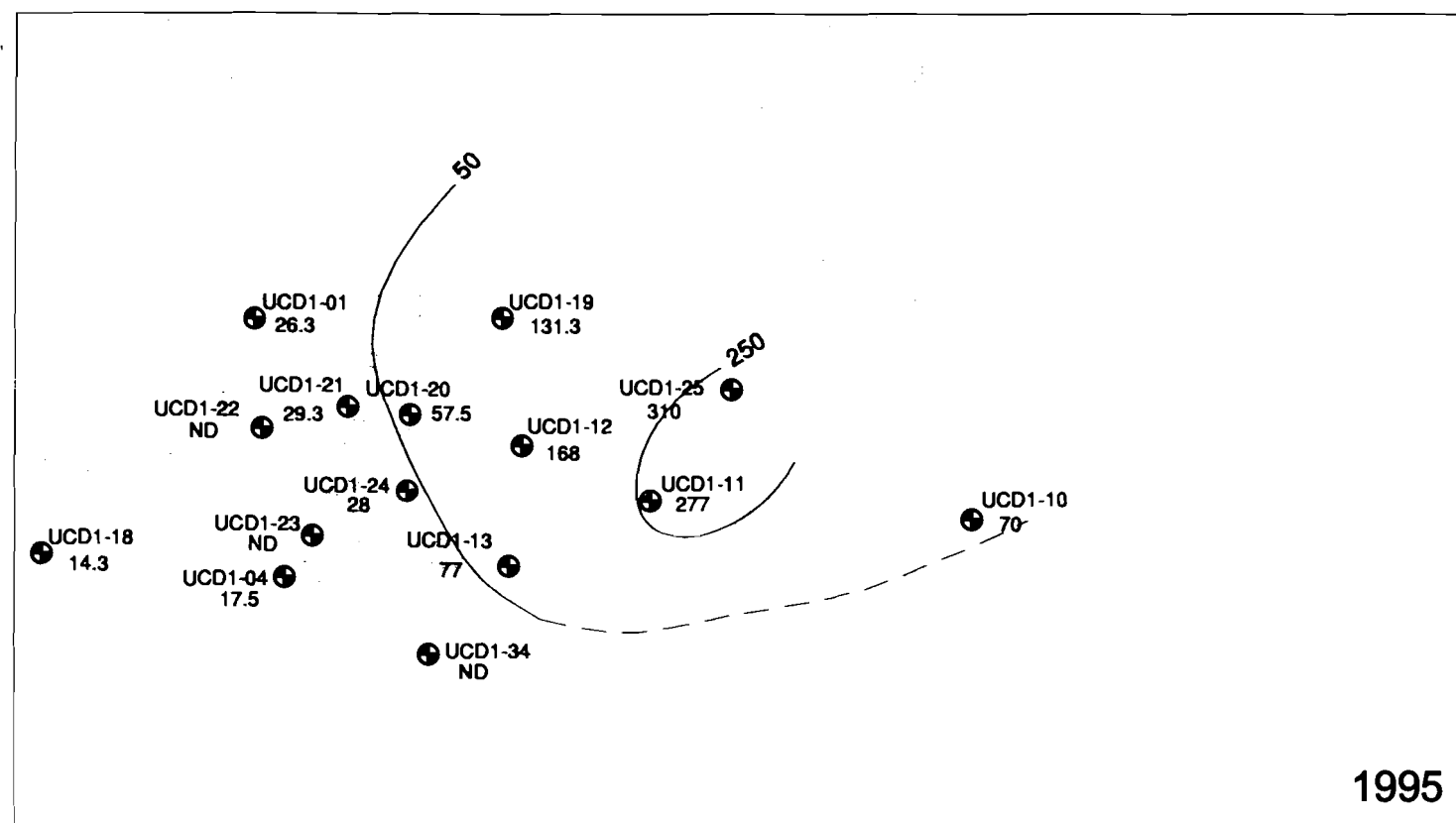
- UCD2-17 HSU-2 Monitoring Well
- All results reported in ug/L
- Result represent average of quarterly data
- NA = Not Analyzed
- ND = Not Detected



PLOTS OF TDS VERSUS TIME IN SELECTED HSU-1 AND HSU-2 WELLS

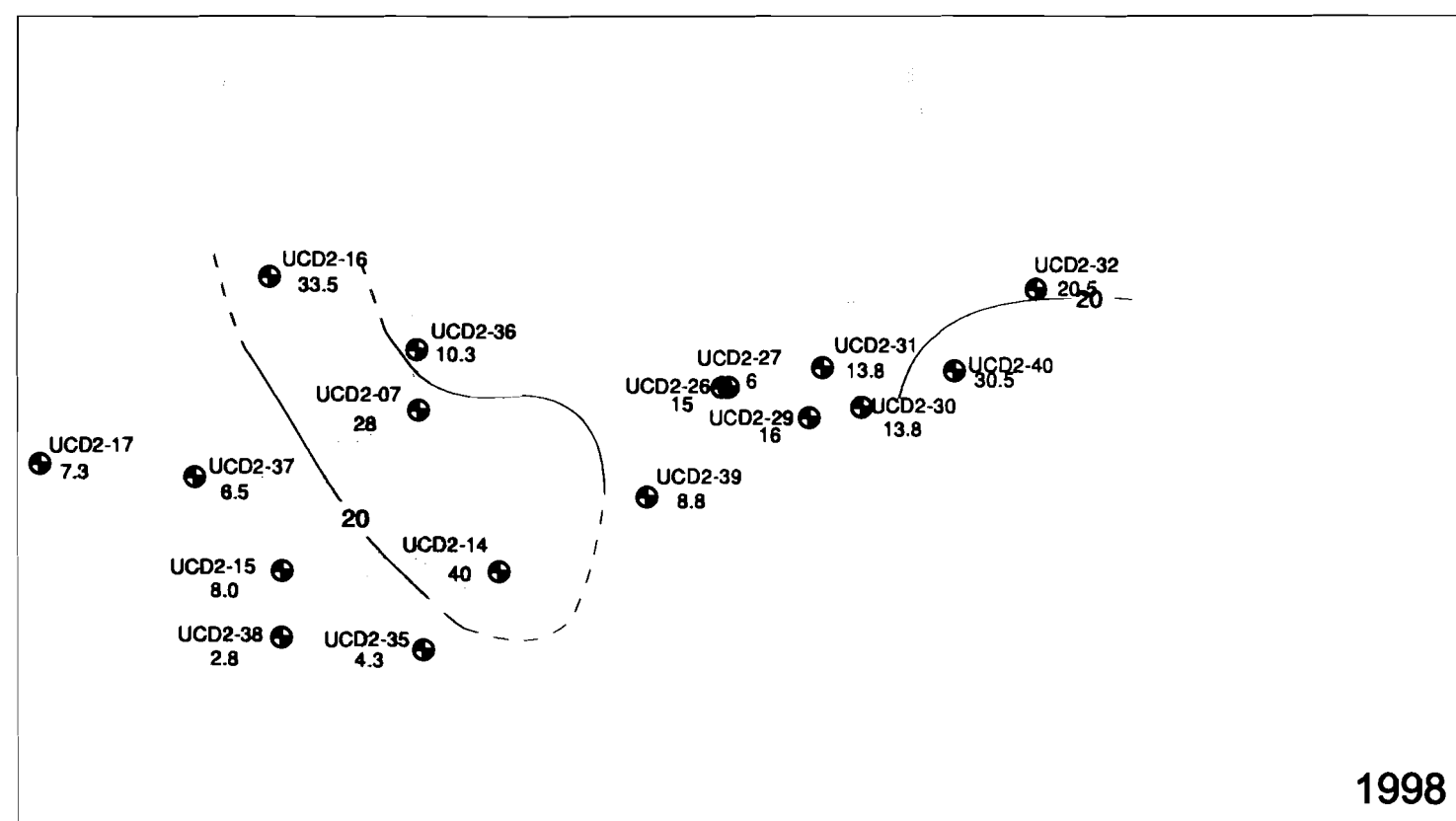
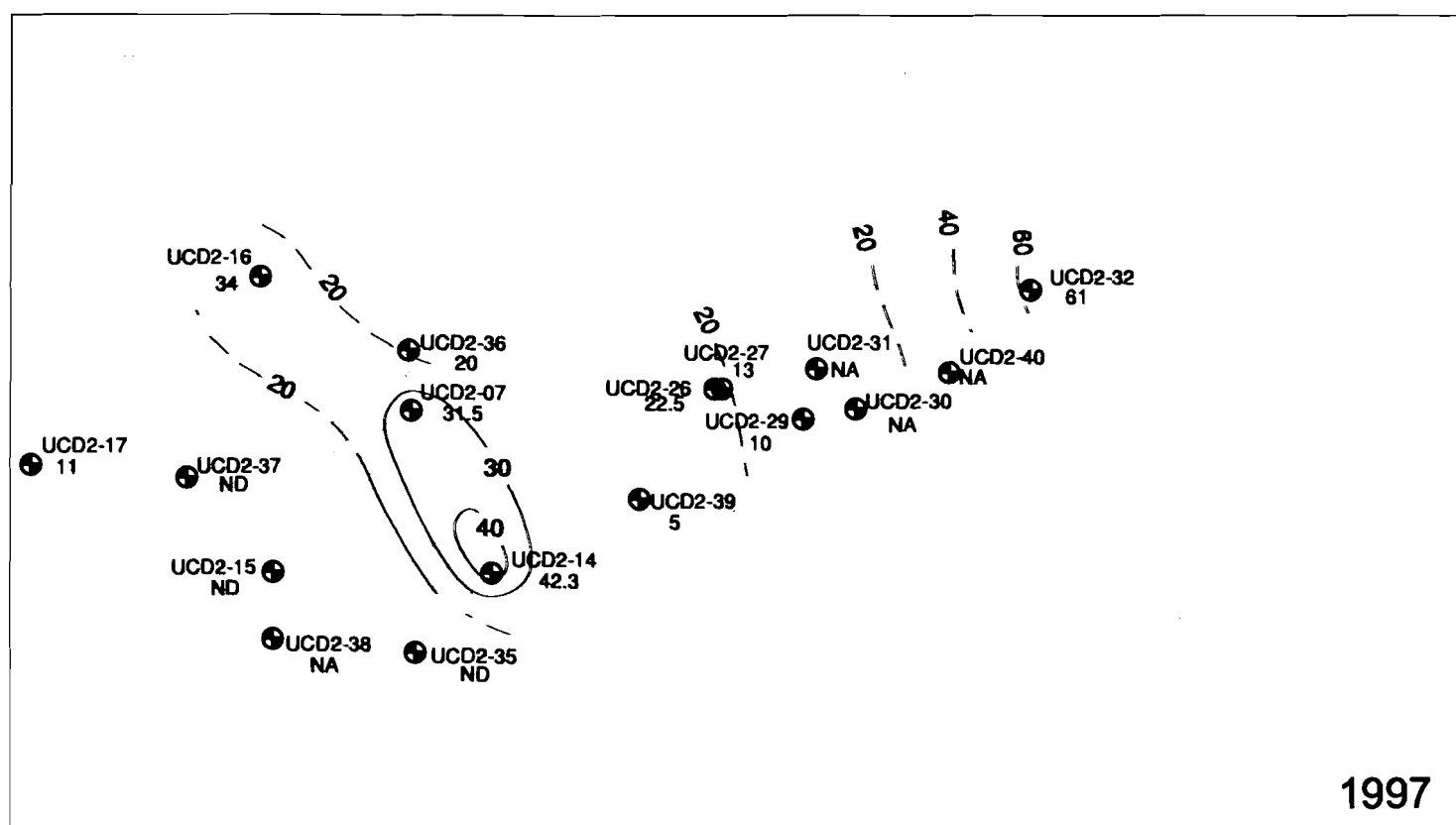
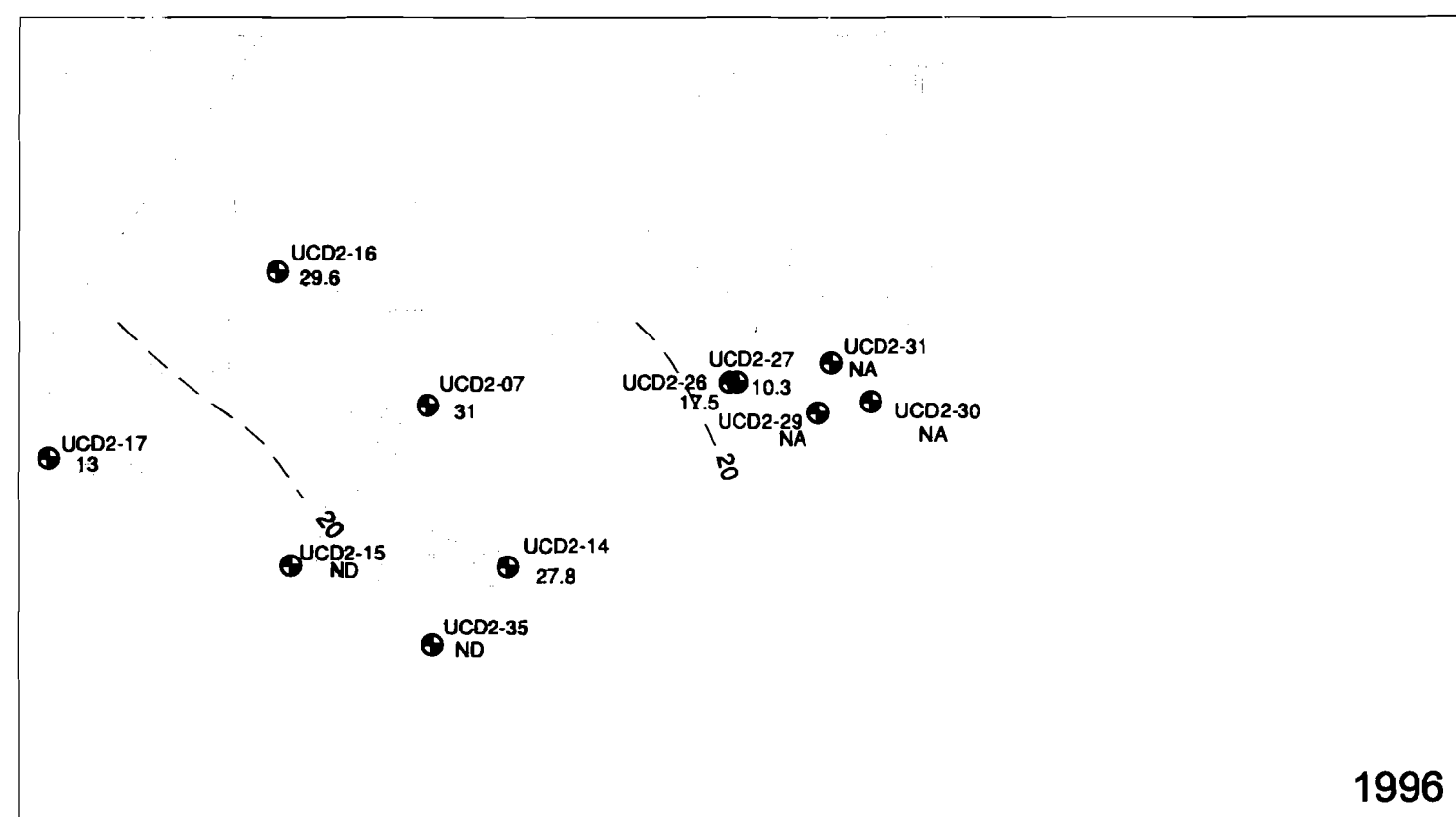
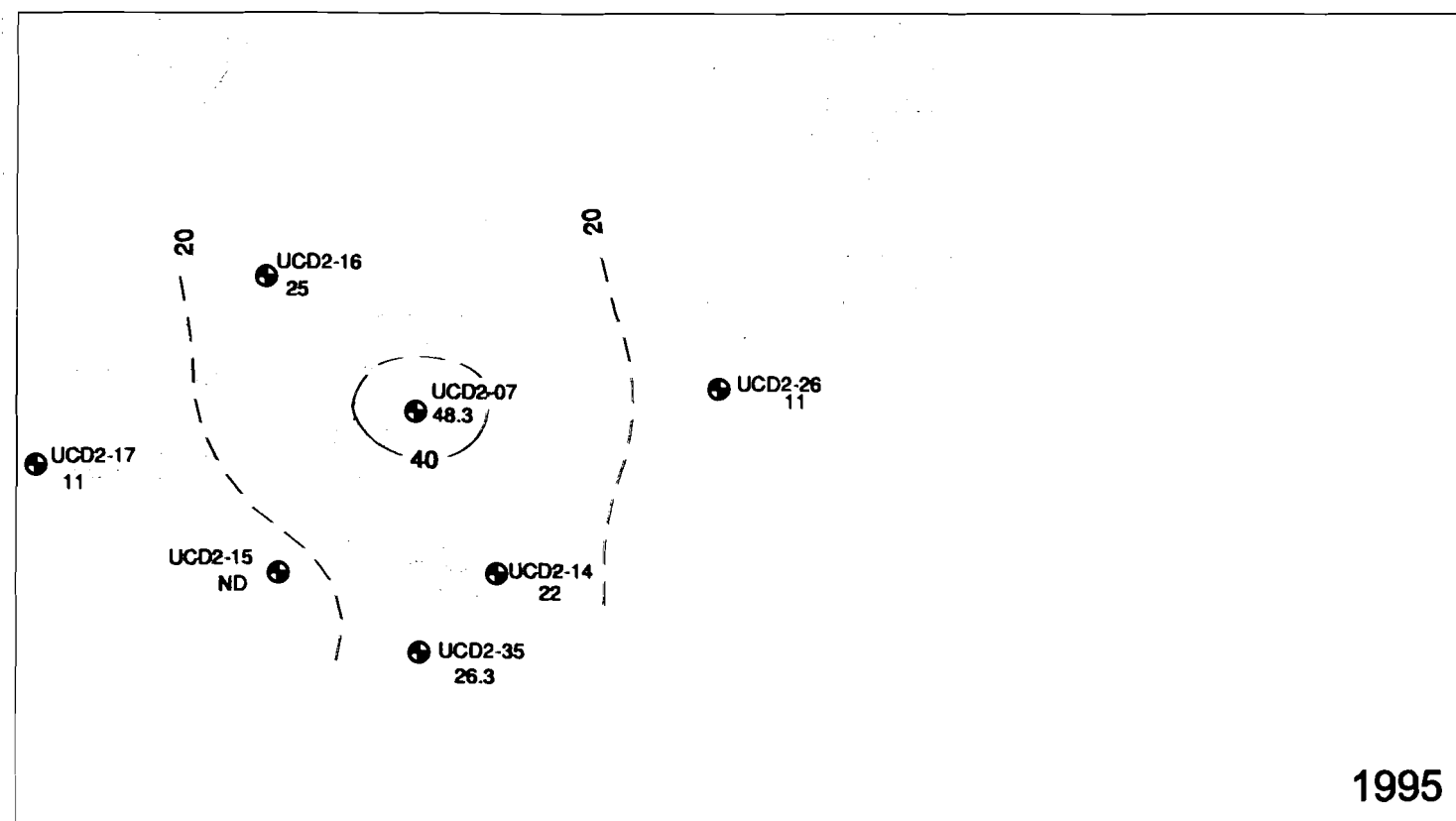
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FIGURE 21



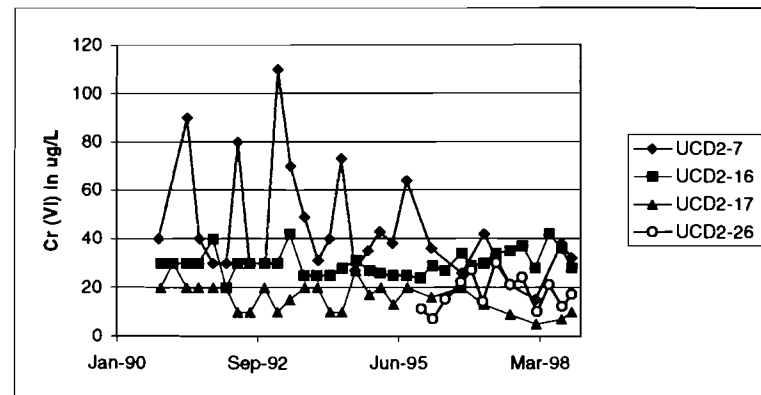
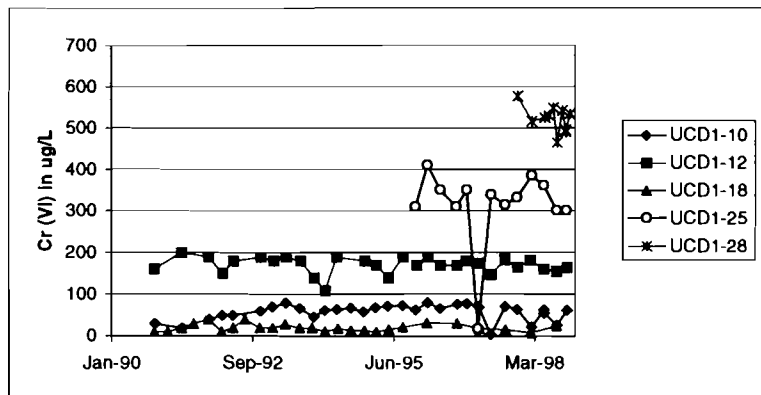
LEGEND

● UCD1-11 HSU-1 Monitoring Well
 All results reported in ug/L
 Results represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected

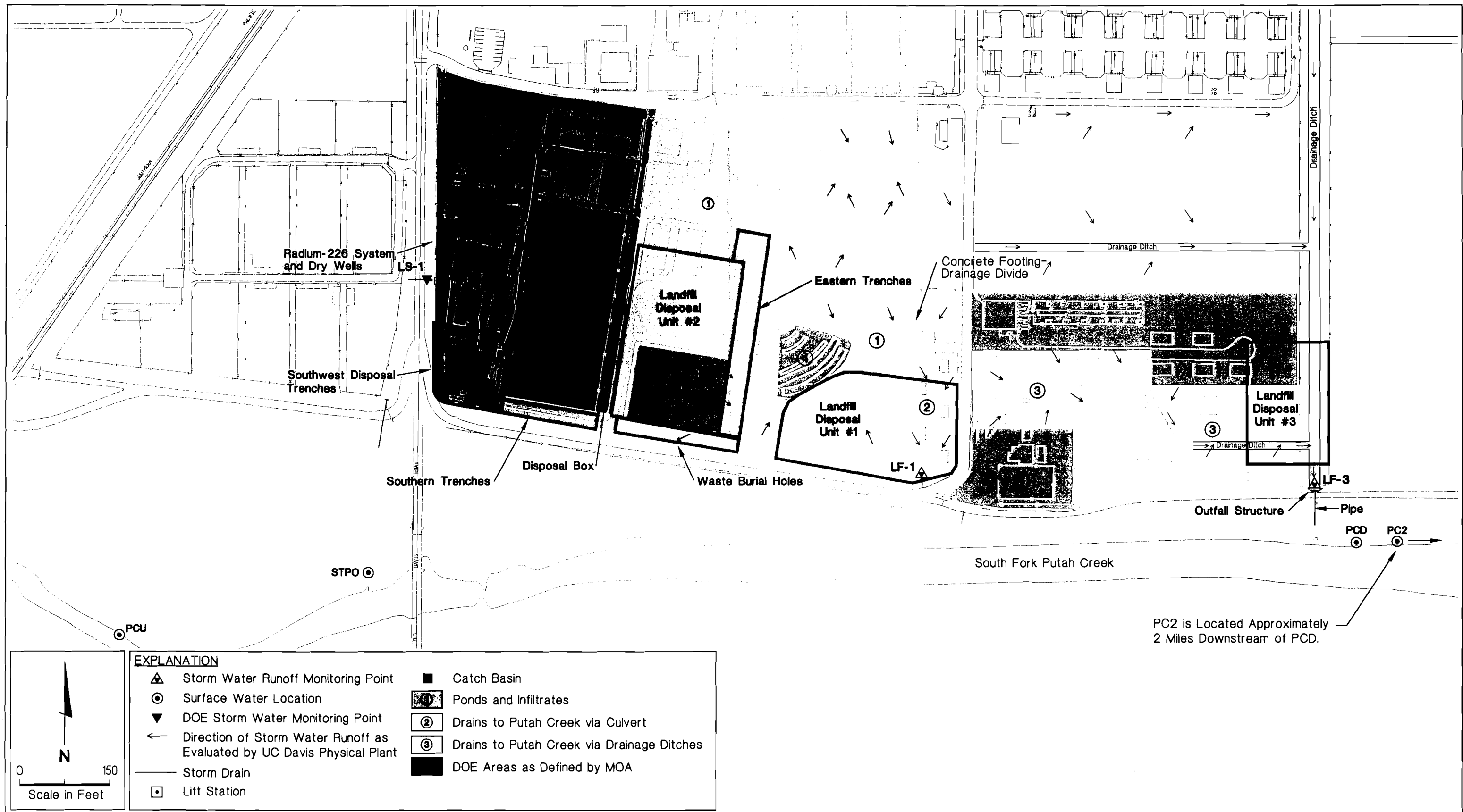


LEGEND
 ● UCD2-17 HSU-2 Monitoring Well
 All results reported in ug/L
 Result represent average of quarterly data
 NA = Not Analyzed
 ND = Not Detected

HEXAVALENT CHROMIUM ISOCONCENTRATION CONTOURS IN HSU-2, 1995 Through 1998
 1998 Annual Water Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California
 Figure 23

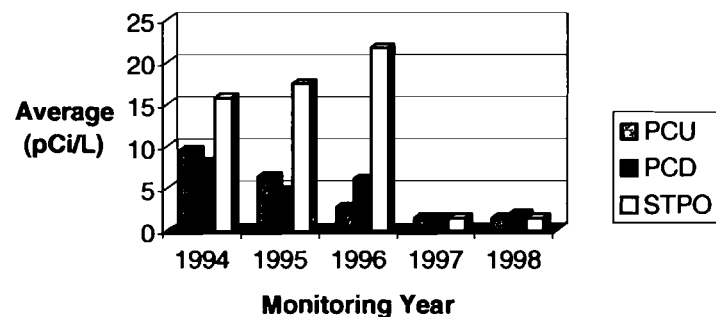


PLOTS OF HEXAVALENT CHROMIUM VERSUS TIME IN SELECTED HSU-1 AND HSU-2 WELLS

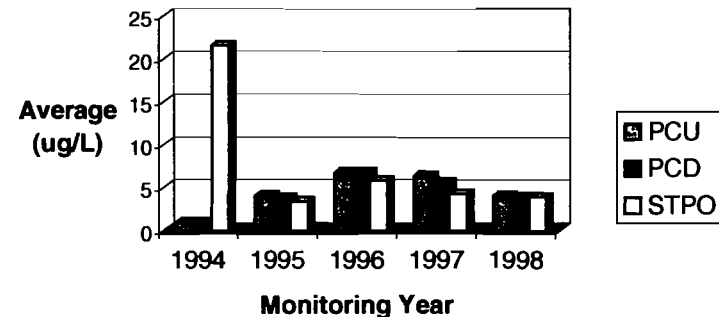


LOCATION MAP
STORM WATER RUNOFF MONITORING POINTS
 1998 Annual Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California
 FIGURE 25

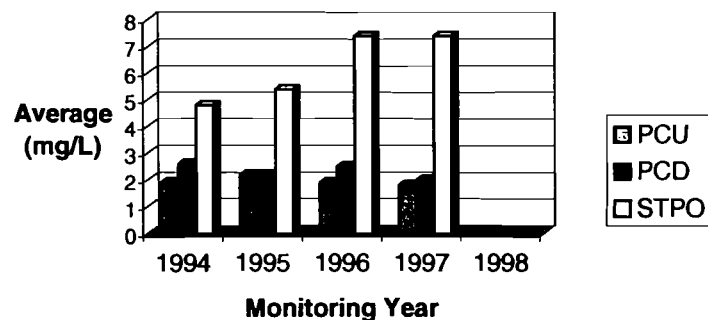
GROSS BETA



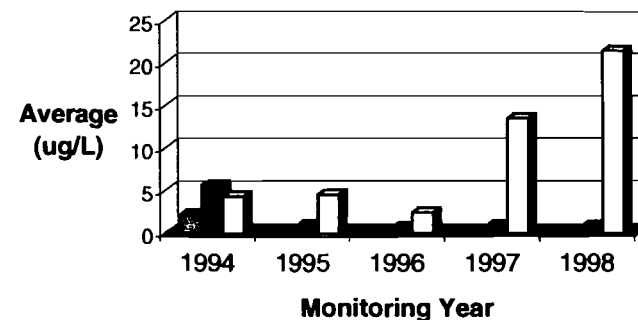
CHROMIUM



NITRATE (AS N)



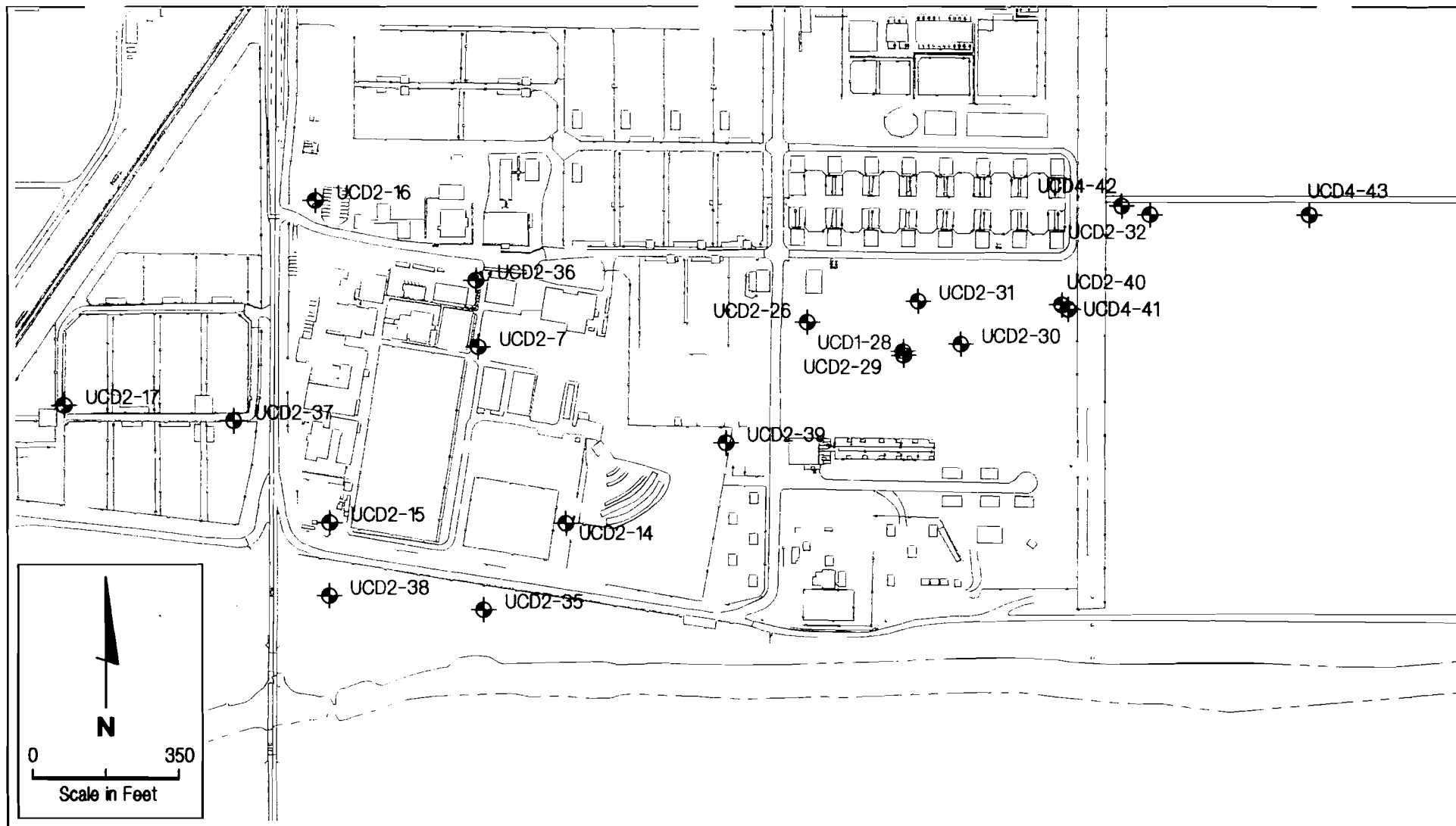
CHLOROFORM



CORRELATION OF DETECTIONS IN SURFACE WATER

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FIGURE 26

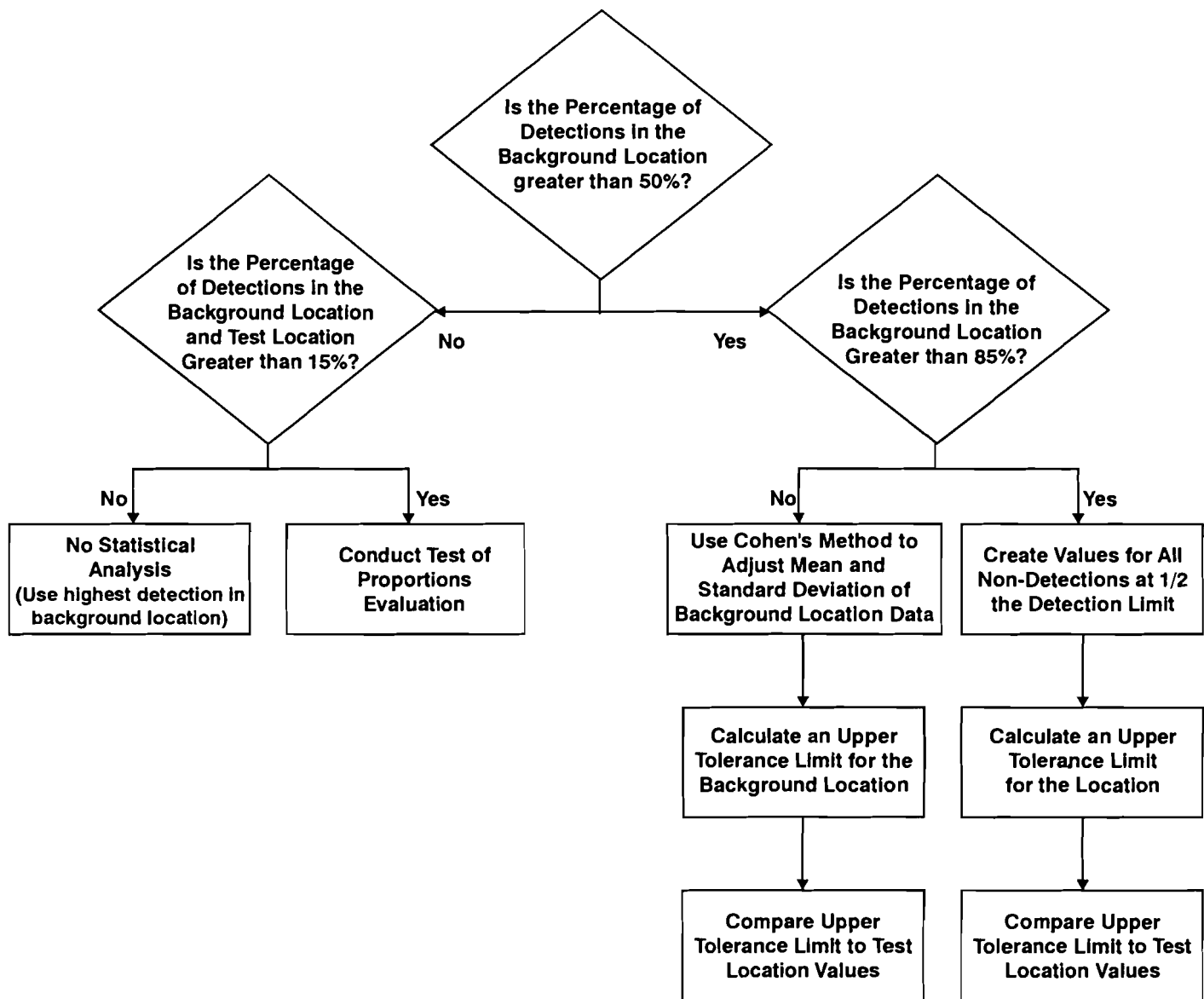


EXPLANATION

- ⊕ UCD1-11 HSU-1 Monitoring Well
- ⊕ UCD2-17 HSU-2 Monitoring Well
- ⊕ EW2-1 HSU-2 Extraction Well
- ⊕ IW2-1 HSU-2 Injection Well
- ⊕ UCD4-33 HSU-4 Monitoring Well

PROPOSED MONITORING WELL NETWORK FOR GROUNDWATER MONITORING

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**STATISTICAL TEST
SELECTION FLOW CHART**
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APPENDIX A

1998 ANNUAL WATER MONITORING RESULTS LEHR/SCDS ENVIRONMENTAL RESTORATION DAVIS, CALIFORNIA

APPENDIX A
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**1998 ANNUAL WATER MONITORING RESULTS
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DAVIS, CALIFORNIA**

A1.0 INTRODUCTION

This report presents the analytical results for the 1998 water monitoring program at the former Laboratory for Energy-related Health Research (LEHR)/South Campus Disposal Site (SCDS) (the Site) located at the University of California, Davis (UC Davis) (Figure A-1). The water monitoring program is performed as part of the environmental restoration project for the Site that is being conducted by the U.S. Department of Energy (DOE) and the University of California. The water monitoring program consists of quarterly sampling of groundwater and surface water and seasonal sampling of storm water runoff. The sampling was performed in accordance with the procedures and analyses detailed in the site-specific the *Revised Field Sampling Plan* (FSP) (Dames & Moore, 1998a) and the *Quality Assurance Project Plan* (QAPjP) (Dames & Moore, 1998b).

A1.1 Purpose and Objectives of Annual Report

The purpose of the water monitoring program at the Site is to monitor the presence or absence of constituents of concern in groundwater and surface water and to track changes in concentration or movement of contaminants over time. This report presents the results of the Fall 1998 monitoring and data validation and summarizes the results of the Winter, Spring and Summer quarters, which have previously been reported (UC Davis, 1998, 1999a, 1999b). The specific objectives of this report are to:

- present a summary and discussion of water monitoring data for groundwater and surface water samples collected during 1998;
- discuss changes in the hydrogeological model;
- present data validation methods and results;
- evaluate the presence of constituents of concern in downgradient wells in relation to background wells;
- evaluate the presence of constituents of concern at surface water and storm water runoff sampling locations; and
- provide data to support the development and implementation of soil and groundwater remediation strategies.

A1.2 Project Overview

The Site is located in Solano County, California, approximately 1.5 miles southwest of the city of Davis. The Site is in the southern portion of the UC Davis campus and is bounded by University research and agricultural facilities, private farmland and the South Fork of Putah Creek. The Site covers approximately 15 acres and contains laboratory buildings and former animal handling facilities.

UC Davis conducted research on laboratory animals at the Site for the U.S. Atomic Energy Commission (later DOE) from the late 1950s until the late 1980s. As a result of LEHR research activities, a variety of laboratory wastes, including radioactive, organic and inorganic materials were disposed of on site in waste burial trenches, radiological liquid waste treatment systems, domestic septic systems and outdoor dog pens (Figure A-2). Adjacent to and co-located with portions of the LEHR site is the SCDS, which consists of three landfill cells and other waste burial trenches and pits used by UC Davis for disposal of general campus refuse, chemical and radiological laboratory wastes and construction debris. Additional detail about the past activities and investigation at the site can be found in the *Phase II Site Characterization Report* (Dames & Moore, 1993) and the *Draft RI/FS Work Plan* (PNL, 1994a).

Since 1988, several phases of groundwater investigation have resulted in the installation of 43 monitor wells, an extraction well, and an injection well. Two wells (UCD1-2 and UCD4-33) have been abandoned. Water levels are measured in 42 wells on a monthly basis and 36 wells are routinely sampled as part of the water monitoring program. The *Revised Field Sampling Plan* (Dames & Moore, 1998a) describes the sequence and phases of well installation and the frequency of well monitoring.

In 1996 UC Davis began planning and design for an Interim Removal Action (IRA) to begin extraction and treatment of groundwater. In May 1998 construction of the IRA treatment system was completed and the system put into operation. The IRA treatment system consists of an extraction well, an air stripper, and an injection well. The IRA was designed to begin to remove chloroform and other VOCs from groundwater at the Site. The system was designed with the intention that the extraction well cut off migration of the chloroform plume, preventing off-site migration of contaminants. Treated water is re-injected upgradient of site source areas. Other site constituents of concern, such as nitrate, total dissolved solids, tritium or hexavalent chromium, are not remediated by the IRA system and will be addressed with future remedial actions.

A1.3 Report Organization

This report is organized into six sections. For ease of reference, tables and figures are included at the end of the report. Section A1 (above) presents introductory and background information to the water monitoring program. Section A2 presents a

discussion of site hydrogeology and water elevations. Section A3 summarizes the 1998 groundwater monitoring data and Section A4 summarizes the 1998 surface water and storm water results. Section A5 summarizes 1998 data quality and Section A6 lists references.

A2.0 HYDROGEOLOGY

This section presents the results of monthly measurement of groundwater levels at the Site. Data for the Winter, Spring and Summer Quarters of 1998 have been reported previously in the *Quarterly Groundwater and Surface Water Monitoring Results* (UC Davis, 1998, 1999a, and 1999b).

A2.1 Site Hydrostratigraphic Units

A description of the Site hydrogeology has been presented in previous reports including the *1995 Annual Water Monitoring Report* (PNNL, 1996) and the *Off-Site Monitoring Well Installation Data Transmittal for the Fourth Hydrostratigraphic Unit* (Dames & Moore, 1998c). The five hydrostratigraphic units (HSUs) identified beneath the Site are discussed in section 3.1.1 of the *1998 Annual Water Monitoring Report*.

A2.2 1998 Monitoring Activities

Of the 43 wells currently monitored at the Site, 41 are groundwater monitoring wells and the remaining two are an extraction well and an injection well. The groundwater monitoring wells are located in the following hydrostratigraphic units: 21 wells in HSU-1; 16 wells in HSU-2; and 3 wells in HSU-4. There is one multi-zone well (UCD1/2-27) which is screened at different intervals within HSU-1 and HSU-2. The extraction and injection wells are constructed in HSU-2.

Water levels were measured monthly, with the exception of wells UCD2-32, UCD2-40, UCD4-41, UCD4-42 and UCD4-43, which were measured weekly. No new wells were installed in 1998.

A2.2.1 Off-Site Groundwater Investigation

Irrigation well 22N (also known as the "Nishi" well) was abandoned between November 1998 and January 1999. This well was located approximately 50 feet east of the UC Davis property boundary, and was abandoned because it would have interfered with the effectiveness of plume capture from the IRA. In addition, the construction of the well allowed a conduit between HSU-2 and HSU-4. A detailed description of the abandonment of well 22N is discussed in Appendix D.

A2.3 1998 Groundwater Elevations Summary

Groundwater elevations were measured monthly for HSU-1 and HSU-2 wells, and weekly for HSU-4 wells. During 1998, HSU-1 groundwater elevations ranged from 6.94

to 35.24 feet mean sea level datum (MSLD). HSU-2 groundwater elevations measured ranged from 0.91 to 33.04 feet MSLD. HSU-4 groundwater elevations measured during 1998 ranged from -15.9 to 31.27 feet MSLD. During 1998 groundwater elevations measured in HSU-1 changed by 21.70 to 25.38 feet, HSU-2 wells changed 21.25 to 25.29 MSLD and HSU-4 wells changed by 43.20 to 46.19 feet MSLD. Groundwater elevations measured for 1998 are presented in Table A-1; quarterly groundwater elevation contour maps are presented in Figures A-4 through A-15; and groundwater elevation hydrographs are presented in Figures A-16 through A-25.

Groundwater elevation data for HSU-1 and HSU-2 wells has been collected for over seven years. Water elevations measured across the Site in HSU-1 and HSU-2 are typically highest in March and April, but in 1998, HSU-1 was highest in February and March. A rapid decline in water levels across the Site occurred from April to August, primarily due to pumping from HSU-2 and HSU-4 as supply to local agriculture during the Spring and Summer months. Water levels recovered from September through December, primarily due to the end of the agricultural pumping season in August, and the beginning of the rainy season in October.

In addition to the overall seasonal changes in water levels, water levels in HSU-1 also respond to changes in Putah Creek stage level. Water levels in HSU-2 wells located near Putah Creek show a dampened response to creek stage level.

A2.3.1 1998 Fall Groundwater Elevations Summary

During the Fall Quarter 1998 monitoring, measured groundwater elevations ranged from 15.71 to 18.78 feet below mean sea level. These elevations were approximately 6.02 to 24.01 feet higher than elevations reported for Summer Quarter 1998 and approximately 6.5 feet higher than elevations reported for Fall Quarter 1997. Comparison of groundwater elevations for the Winter, Spring and Summer Quarters of 1998 have been reported previously in the Quarterly Groundwater and Surface Water Monitoring Results (UC Davis, 1998, 1999a, and 1999b).

A2.4 Horizontal Groundwater Gradients

Figures A-4 through A-15 show groundwater elevation contours for HSU-1, HSU-2, and HSU-4 wells in 1998. In 1998, the groundwater flow direction in HSU-1 was northeast. HSU-1 horizontal hydraulic gradients ranged from approximately 0.003 to 0.0015 ft/ft and were shallower in the Fall and Summer and steeper in the Winter and Spring. This is consistent with gradients and flow directions observed in previous years.

In 1998, the groundwater flow direction in HSU-2 was interpreted to be east with a northerly component. HSU-2 horizontal hydraulic gradients in 1998 ranged from approximately 0.0007 to 0.0024 ft/ft and were shallower in the Fall and Winter and

steeper in the Spring and Summer. This is consistent with gradients and flow directions observed in previous years (PNNL, 1996a; Weiss Associates, 1997).

In 1998, the groundwater horizontal hydraulic gradient in HSU-4 ranged from approximately 0.0004 to 0.013 ft/ft. The groundwater flow direction was to the northeast during the Fall/Winter months and southeast during the Spring/Summer months. The change in groundwater flow direction is likely due to seasonal pumping for irrigation supply.

A2.5 Vertical Groundwater Gradients

Ten well pairs exist at the Site and were used to qualitatively estimate vertical groundwater gradients. Eight of the ten well pairs consist of a monitoring well completed in HSU-1 adjacent to a monitoring well completed in HSU-2. HSU-1/HSU-2 well pairs include: UCD1-18 and UCD2-17; UCD1-1 and UCD2-16; UCD1-20 and UCD2-7; UCD1-13 and UCD2-14; UCD1-34 and UCD2-35; UCD1-25 and UCD2-26; UCD1-11 and UCD2-39; and UCD1-28 and UCD2-29. Two of the ten well pairs consist of a monitoring well completed in HSU-2 adjacent to a monitoring well completed in HSU-4. HSU-2/HSU-4 well pairs include UCD2-40 and UCD4-41; and UCD2-32 and UCD4-42 (Figure A-3).

Vertical groundwater gradients were estimated using water level elevation differences measured between wells in a well pair. Water level elevations are presented in Table A-1. The bottom portion of the hydrographs presented in Figures A-16 through A-25 plot a line that represents the difference in water level elevation between the wells in a well pair (HSU-2 minus HSU-1 or HSU-4 minus HSU-2). A downward vertical gradient is expressed when the plotted line is below zero and occurs when the HSU-1 water level is greater than the HSU-2 water level or the HSU-2 water level is greater than the HSU-4 water level. An upward vertical gradient is expressed when the plotted line is above zero and occurs when the HSU-2 water level is greater than the HSU-1 water level or the HSU-4 water level is greater than the HSU-2 water level. No net vertical gradient is indicated when water levels are the same for the wells in a well pair and when the plotted line is at zero.

During 1998, vertical groundwater gradients between HSU-1 and HSU-2 were generally downward in most wells for most of the year. Several wells demonstrated an upward gradient (from HSU-2 to HSU-1) during the Fall. These results are similar to past years when the apparent vertical groundwater gradient has typically been downward during the pumping season and relative flat (near zero) or upward during the rainy season.

The difference in water levels measured between HSU-2 and HSU-4 ranged from -19.45 to 0.01 feet in well pair UCD2-40/UCD4-41 and -15.83 to 7.78 feet in well pair UCD2-

32/UCD4-42. The vertical groundwater gradient was generally downward in both sets of well pairs, except for the month of February 1998.

A2.6 Effects of the Interim Removal Action on Water Levels

Operation of an Interim Removal Action (IRA) for groundwater began in May 1998. The IRA consists of an HSU-2 extraction well (EW2-1) located downgradient of site source areas, a treatment system to remove VOCs, and an injection well (IW2-1) upgradient of the site. Since the IRA began operation, the withdrawal of groundwater from well EW2-1 has caused a decrease in groundwater elevations in adjacent HSU-2 monitor wells. There has not been an overall decline in water levels in these wells, as water elevations across the site are generally higher this year compared to last year, but the increase in water elevations was not as great in wells near EW2-1 as in other site wells.

Review of water elevations in IW2-1 have been compared with water elevations in nearby wells and indicate that water levels in IW2-1 have been increasing at a higher rate than nearby wells. This could indicate fouling of the injection well. This trend is being tracked and will be reviewed further when the annual operations report for the IRA is prepared after a complete year of system operation.

A3.0 SUMMARY OF 1998 GROUNDWATER MONITORING RESULTS

This section summarizes the analytical results for the 1998 groundwater monitoring program. Results are presented within each analytical category along with a brief discussion of the data. Appendix B contains all results for 1998, grouped by quarter, for each analytical category.

A3.1 General Chemicals

Included in the category of General Chemicals reported for groundwater are alkalinity (total as CaCO_3), anions (chloride, nitrate, phosphorus, and sulfate), total dissolved solids, and total organic carbon. In general, results in 1998 for these analytes were similar to those reported during 1997. Concentrations for most of the analytes in this category are greater for samples collected from wells completed in HSU-1 than for samples collected from wells completed in HSU-2.

During 1998, 54 samples were collected for alkalinity and anions. Results for alkalinity and chloride were within the range of results reported for 1997. Phosphorus was detected in three wells (UCD2-29, -30, and -32) in the Spring Quarter at concentrations of 1.02, 1.51, and 1.52 mg/L, respectively. In 1998, sulfate results for most of the site were reported below 50 mg/L. One exception was a sample collected in Summer quarter for UCD1-10 with a reported concentration of 295 mg/L.

Nearly all site wells are tested at least annually for nitrate. In 1998, 115 samples were collected from 35 site wells for the quarterly monitoring program. Additional samples were collected monthly in wells monitored for the IRA. Analytical results for nitrate as nitrogen indicated that most HSU-2 wells had slightly lower nitrate concentrations when compared to 1997 data. In addition, analytical results for samples collected from HSU-1 wells are generally reported at greater concentrations than results for samples collected from HSU-2 wells. HSU-1 wells with the highest reported concentrations included UCD1-24 (73.1-99.8 mg/L), UCD1-12 (54.1-68.4 mg/L), UCD1-21 (61.6-64.0 mg/L), UCD1-28 (36.8-49.6) and UCD1-10 (34.8-40.9 mg/L). Section 3.2 of the *1998 Annual Water Monitoring Report* presents further discussion of nitrate as a constituent of concern for the site.

Samples for Total Organic Carbon are collected from most site wells on a quarterly basis. 101 samples were collected in 1998 from 33 site wells. Concentrations reported in 1998 varied and mostly ranged from 1 to 15 mg/L. As with nitrate as nitrogen, reported TOC concentrations are generally higher for samples collected from HSU-1 wells than for samples collected from HSU-2 or HSU-4 wells. In addition, concentrations for samples collected from wells UCD1-10, UCD1-12 and UCD1-13, which are downgradient of waste burial areas, are often the highest reported on the site. For most site wells, the 1998 results were lowest in Winter. An exception was UCD1-13, in which the Winter result (85.9 mg/L) was greater than previous concentrations reported for this well. The Spring result for this well was 4.04 mg/L, just above the 1997 results of 1.3-1.6 mg/L.

Total dissolved solids were analyzed in 101 quarterly samples from 33 site wells. Analytical results for 1998 were within the range reported for 1997, with the majority of reported concentrations slightly below 1997 levels. TDS concentrations ranged from 390 mg/L in UCD1-34 (levee wells are generally lowest, probably due to the influence of Putah Creek) to a high of 1,510 mg/L in UCD1-10. Reported concentrations of TDS are consistently highest in wells UCD1-10, UCD1-12, and UCD1-13 which are downgradient of waste burial areas. TDS was also monitored on a monthly basis in wells associated with the IRA. Since the IRA monitoring began in May 1998, TDS levels in system effluent have remained very close to the monthly average discharge limit of 485 mg/L. During the first seven months of IRA operation, results for the monitoring well closest to the injection well have not increased. Results for UCD2-37 have remained consistently between 400-420 mg/L since it was first monitored in Fall 1997. Section 3.2 of the *1998 Annual Water Monitoring Report* presents further discussion of total dissolved solids as a constituent of concern for the site.

A3.2 Metals

During the four quarters of groundwater monitoring in 1998, a total of 80 samples were collected for metals analysis from 35 site wells. These samples were analyzed for 19 constituents using EPA Contract Laboratory Program Method for Low Concentration Inorganics (ILC 02.0). The cations (calcium, magnesium, potassium, and sodium) were reported along with the metals, and were analyzed by EPA Method 6010. Hexavalent chromium samples were collected at least once during the year from every site well except UCD1-22, for a total of 107 samples analyzed in accordance with EPA Method 7196. In addition, as part of the IRA treatment system monitoring, 8 samples were collected for analysis of total and hexavalent chromium. The IRA sampling is done monthly, and those samples that were collected during the quarterly sampling were reported with the quarterly data as well as in the monthly operations reports.

The metals antimony, beryllium, cadmium, cobalt, copper, lead, mercury, molybdenum, potassium, silver and thallium were not detected above contract required detection limits in any 1998 groundwater samples. Manganese was reported above the contract required detection limit once (well UCD2-38 at 34.0 mg/L, Winter quarter). Nickel was reported above the contract required reporting limit three times (UCD1-23 at 90.1 mg/L, UCD1-28 at 27.5 mg/L, and UCD2-26 at 20.9 mg/L, all during the Winter quarter), and zinc was reported above the contract required detection limit once during the year (Fall quarter, UCD1-28 at 58.4 mg/L).

The metals results for 1998 are generally consistent with historical data. Reported concentrations for many metals are consistently higher in HSU-1 than in deeper site wells. Both hexavalent chromium and total chromium were reported in most site samples collected during 1998. The highest reported concentrations for chromium were consistently reported in UCD1-28. Further discussion of chromium as a constituent of concern for the site is included in Section 3.2 of the *1998 Annual Water Monitoring Report*. In addition, the reported concentration for the cations—calcium, magnesium, and sodium in wells UCD1-10, -12, and -13 are generally higher than in most other site wells and may be due to the location of these wells in relation to waste burial units.

A3.3 Pesticides and PCBs

A total of 83 pesticide and PCB samples and five duplicates were collected from 30 site wells during the 1998 quarterly groundwater monitoring. Samples were analyzed for the list of 28 target compounds in accordance with EPA Method 8080. No PCB compounds were reported in 1998. Sporadic detections of pesticides were reported in each quarter for 1998. A total of eleven different pesticides were reported in site groundwater, although most detections were below contract required detection limits. Five pesticide compounds were reported one time each at levels equal to or above the contract required detection limit. These five compounds included: 4,4'-DDE at 0.029 µg/L in

UCD1-28 (Spring quarter), 4,4'-DDT at 0.05 µg/L in UCD2-40 (Fall quarter); alpha chlordane at 0.016 µg/L in UCD1-13 (Spring quarter); dieldrin at 0.02 µg/L in UCD1-13 (Winter quarter); and gamma chlordane at 0.016 µg/L in UCD1-13 (Spring quarter).

The 1998 data (as well as in previous years) show most reported detections of pesticides occurred in UCD1-13 at concentrations below the contract required detection limit. These include 4,4'-DDD, alpha-chlordane, endrin, endrin ketone, and gamma chlordane reported during one or two sampling quarters, and dieldrin was reported in all four quarters.

A3.4 Radionuclides

Every site well except **UCD1-1** is monitored for radioactivity at least once during the year. In 1998, 116 samples were collected for various radionuclide analyses from 35 site wells. Radiological analyses performed include tests for Gross Alpha and Gross Beta radioactivity, Gamma Spectral Analysis (for gamma emitting radionuclides), and specific tests for americium-241, carbon-14, plutonium-241, radium-226, strontium-90, and tritium. The vast majority of results were below the minimum detectable activity (MDA), and the following radionuclides were not reported above the contract required detection limit in any groundwater sample: actinium-228, americium-241, bismuth-212, cobalt-60, lead-210, lead-212, plutonium-241, potassium-40, sodium-22, thallium-208, thorium-234, uranium-235 and uranium-238. The remaining radionuclides were detected at least once over the year above the contract required reporting limit. A discussion of these detections follows.

- **Bismuth-214** was detected above the MDA at least once in 85% of wells sampled. The range of detections was 8.3±5.5 pCi/L in UCD2-14 to 229±38.3 pCi/L in UCD2-25. No relations to waste burial units are observed in the spatial distribution of sample results, and no consistent pattern of detections is apparent
- **Carbon-14** is consistently detected in samples collected from four site wells, UCD1-12, UCD1-13, UCD1-23, and UCD2-14. In general, the 1998 results were lower in all four of these wells, compared to results reported in 1997. Highest reported concentrations are found in UCD1-13, which ranged in 1998 from 1340±27.5 pCi/L to 1600±32.6 pCi/L. Carbon-14 was also reported at concentrations below the contract required detection limit (20 pCi/L) in seven other site wells (UCD2-29, -30, -32, -38, -39, -40, and UCD4-41). Since the laboratory MDA for carbon-14 was reduced in 1998, additional samples were collected in the Fall quarter from the background wells to further develop background data. As a site constituent of concern, carbon-14 is discussed in Section 3.2 of the 1998 *Annual Water Monitoring Report*.

- **Cesium-137** was reported once above the contract required detection limit. It was detected in the Winter sample from UCD1-04 at 95.5 ± 12 pCi/L.
- **Gross Alpha and Gross Beta** samples were collected from all site wells in 1998, and concentrations below the contract required detection limit were reported in most samples. Results for Gross Alpha that were reported above the minimum detectable amount ranged from 0.957 ± 0.46 pCi/L in the Winter duplicate sample from UCD1-20 to a high of 11.1 ± 2.7 in the Winter sample from UCD1-11. For Gross Beta, the range was from 1.08 ± 0.65 pCi/L in the Spring sample from UCD2-40 to a high of 7.99 ± 3.86 pCi/L in the Winter sample from UCD1-12. No relations to waste burial units are observed in the spatial distribution of sample results, and no consistent pattern of detections is apparent.
- **Lead-214** was reported above the MDA at least once in 90% of wells sampled. No relations to waste burial units are observed in the spatial distribution of sample results, and no consistent pattern of detections is apparent. The range of detections above the MDA were 5.47 ± 5.53 pCi/L in UCD1-12 to a high of 240 ± 30.1 pCi/L in UCD1-28.
- **Radium-226** concentrations reported for 1998 appeared to vary slightly over the four quarters of monitoring. Higher reported concentrations occurred during the Summer and Fall quarters. The range of reported concentrations above the contract required detection limit was 1.03 ± 0.452 pCi/L in well UCD2-31 in the Fall quarter to 5.15 ± 1.14 pCi/L in well UCD2-37 in the Summer quarter. No concentrations above the contract required detection limits were reported during the Winter or Spring quarters. Wells UCD1-12, -13, -22, and -23, located near waste burial areas, have recently shown low level detections. During 1997 and 1998, results from UCD1-12 have more consistently indicated low concentrations (0.59 - 2.5 pCi/L) of radium-226. In 1998, radium-226 was detected in UCD1-13 in three of four monitoring quarters with results between 0.75 ± 0.48 and 2 ± 0.943 pCi/L. Both UCD1-22 and UCD1-23 had positive detections (up to 2 pCi/L) each time they were sampled in 1998.
- **Strontium-90** was reported above the MDA in just one sample. It was detected in the Spring sample from UCD1-13 at 1.07 ± 0.036 pCi/L.
- **Tritium** concentrations were down in 1998 compared to 1997 results for both UCD1-13 and UCD2-14. In UCD1-13, results ranged from 15,700-17,600 pCi/L. In UCD2-14, results were below average, from just 480 to 4010 pCi/L. One unusual result was from UCD2-35 in Fall, where 1350 pCi/L was reported. As a site constituent of concern, tritium results are further discussed in Section 3.2 of the *1998 Annual Water Monitoring Report*.

A3.5 Semivolatile Organic Compounds

During 1998 sampling, 67 samples were collected from 26 wells for analysis of semivolatile organic compounds in site groundwater. Samples were analyzed for the list of 62 target compounds in accordance with EPA Method 8270. Only one sample had a reported detection for any of these compounds. The bis(2-ethylhexyl)phthalate result for the Winter sample from background well UCD2-17 was 88.3 µg/L. The highest previously reported concentration of this compound for samples collected from this well was 5.3 µg/L in 1992. The results for the Fall sample were non-detect. Although the data validation process found no indication of analytical error, the result is considered an outlier, since it does not correspond to historical results for this well. Well UCD2-17 was resampled in the Fall for SVOCs to verify the Winter sample result.

A3.6 Volatile Organic Compounds

Volatile organic compound samples were collected 109 times in 1998 from 34 site monitoring wells. Samples were analyzed for the list of 40 target compounds in accordance with EPA Method CLP SOW OLC 02.0. In order to achieve site data requirements, the contract required quantitation levels were set at the lower levels defined in EPA Method 8260. A total of 20 VOCs were detected in 1998 groundwater samples. Nine of the VOCs occurred sporadically and were detected below the contract required detection limit. A majority of the VOCs that were reported above detection limits in 1998 have been detected in specific site wells on a regular basis over the past several years. These VOCs are discussed in the bulleted items below.

All VOCs discussed below except tetrachloroethene were reported in samples collected from UCD1-12 at least once during the year, and many were also reported in HSU-2 wells downgradient of UCD1-12. Detection limits for VOCs in the Winter sample from UCD1-12 were reported at 50 times the normal levels due to the dilution performed when the chloroform exceeded calibration limits defined by the method. In subsequent quarters, this situation was corrected by the laboratory so that the contract required detection limits could be maintained.

Groundwater remediation from the Interim Removal Action (IRA) treatment system appeared to affect reported VOC concentrations from samples collected from HSU-2 wells. The treatment system came on-line in May of 1998, and by the time the Summer quarter samples were collected in August, there was an apparent affect on VOC concentrations in monitoring wells located near the extraction well. Chloroform concentrations increased in the monitoring wells closest to the extraction well, and decreased in wells downgradient in both HSU-2 and HSU-4. There was a decrease in the number of downgradient wells reporting VOCs other than chloroform between the Spring and Summer quarters, as well as a decrease in the concentrations of several VOCs that were reported.

- **1,1,2-Trichloroethane** was consistently reported in UCD1-12 at concentrations ranging from 1.0-2.8 µg/L. This is similar to results reported for this well in 1996 and 1997. It was not detected in any other site well during 1998.
- **1,1-Dichloroethane** was detected in samples collected from ten wells during 1998. Most detections occurred in the Spring and ranged in concentration from 0.12 µg/l to 4.3 µg/L. This compound was detected in three wells sampled during the Summer quarter (UCD1-12 at 10.7 µg/L, UCD2-29 at 0.69 µg/L, and UCD2-40 at 0.36 µg/L), and in Fall it was only reported in UCD1-12 at 9 µg/L. The range of results for 1998 (0.2-10.7 µg/L) was similar but slightly lower than that reported last year. Wells downgradient of the extraction well had lower (or non-detect) results in both Summer and Fall.
- **1,1-Dichloroethene** was detected in samples collected from seven wells during 1998, although only two of these wells (UCD1-12 and UCD2-40) had repeat detections. Concentrations were highest in UCD1-12 (9.9-13.7 µg/L) and 1 µg/L or less in other wells.
- **1,2-Dichloroethane** was detected in samples collected from nine wells during the Spring sampling quarter, compared to samples from two wells in the Summer quarter. 1998 concentrations (0.3-4.4 µg/L) were similar to those reported last year, although wells downgradient of the extraction well had reduced (or non-detect) concentrations in both Summer and Fall.
- **1,2-Dichloropropane** was reported in 12 wells during Spring quarter. This was reduced to just 5 wells in Summer. The range of results reported (0.2-1.3 µg/L) was similar to last year, although wells downgradient of the extraction well had lower (or non-detect) results in both Summer and Fall.
- **Bromodichloromethane** was reported each quarter in UCD1-12, but was not detected in any other site well. The 1998 range of results was 0.6-12.6 µg/L. This range has been increasing slightly over the past few years, although results for this compound seem to be highest in quarters with the most rainfall (Winter or Spring), and drop again during subsequent quarters.
- **Bromomethane** and **chloromethane** were both reported in the VOC sample from UCD1-12 in Summer, at 1.3 and 1.4 µg/l, respectively. Bromomethane was also reported in the Winter sample from UCD1-4 at 0.84 µg/L.
- **Chloroform** was consistently detected in fifteen site wells and sporadically detected in a few others. As in previous years, highest concentrations were found in UCD1-12 (3,400-5,960 µg/L), although results for this well were less than last year, and have indicated a downward trend for several years. Chloroform is also found in a number of downgradient wells at reported concentrations between 1 and 234 µg/L. As discussed above, after the IRA system began operation in May of 1998, chloroform concentrations in wells near the extraction well have increased and concentrations in

wells downgradient of the extraction well have decreased. Additional discussion regarding chloroform as a site constituent of concern is provided in *1998 Annual Water Monitoring Report*.

- **Tetrachloroethene** was reported in one site well (UCD1-24) during 1998. Concentrations in this well have been below or equal to the contract required detection limit of 0.5 µg/L. This compound was also detected in the area of this well during passive soil gas monitoring that was conducted in the Fall of 1998.
- **Trichloroethane** was reported in three wells (UCD1-12, UCD1-13, and UCD1-24) at concentrations below 0.1 µg/l during the Spring quarter. It was not detected in any site well in subsequent quarters. Similar results were reported in 1997.

A4.0 SUMMARY OF 1998 SURFACE WATER AND STORMWATER MONITORING RESULTS

This section summarizes the analytical results for the 1998 surface water and storm water monitoring program. The following subsections summarize 1998 data and compare results to upstream samples. Tables presenting all surface and storm water results for 1998 are presented in Appendix B.

A4.1 Surface Water Monitoring Program

Surface water samples were collected along with groundwater samples during the 1998 Winter, Spring, and Summer sampling rounds. Program changes made after the Summer round mandated that future surface water sampling be performed in conjunction with storm water sampling, which is done twice a year at times of significant site storm water runoff (Dames & Moore, 1998a). Since significant runoff did not occur in the Fall of 1998, surface water samples were not collected during that time.

Surface water samples are drawn from three locations on Putah Creek: a location (called PCU) upstream of both the Site and the campus wastewater treatment plant outfall; the wastewater outfall itself (called STPO) which is also upstream of the Site; and a location (PCD) just downstream of the Site. Constituents that are found in water downstream of the site are compared to levels found in either of the two upstream locations; any significant differences could reflect an impact from the site and warrants further evaluation in terms of frequency of detection, historical trends, and review of data quality. Duplicate field samples were taken during each of the sampling rounds. PCD samples were duplicated in Winter, STPO in Spring, and PCU in Summer.

In general, for all categories of analytes, 1998 results were similar to those of 1997. Downstream concentrations were very similar in value to upstream locations with some exceptions that are discussed below in each category. Discussion of results from the STPO will be limited only to possible effects on downstream concentrations.

Complete data tables for all constituents, including detection limits, analytical results, and data quality notations, can be found in Appendix B. The applicable test methods and contract required detection limits for each analyte can be found in the Revised FSP (Dames & Moore, 1998a).

A4.1.1 General Chemicals

For this monitoring program, the category General Chemicals includes alkalinity (as CaCO_3), hardness, anions (chlorides, nitrate, phosphate, and sulfate), cations (calcium, magnesium, potassium, and sodium), total dissolved solids, and total organic carbon. Most of these analytes typically occur in surface water at varying concentrations.

Alkalinity was measured at each location during each of the sampling rounds. Concentrations were lowest (<150 mg/L) in Winter and highest in Spring (>200 mg/L). No significant differences were noted between upstream and downstream concentrations.

Hardness was measured at each location during each of the sampling rounds. Concentrations were lowest (<150 mg/L) in Winter and highest in Spring and Summer (>200 mg/L). No significant differences were noted between upstream and downstream concentrations.

Chlorides were measured at each location during each of the sampling rounds. Concentrations were typically lowest (<6 mg/L) in Winter and highest in Spring (>20 mg/L). Downstream concentrations were approximately 10-20% higher than upstream in Winter and Spring, but this could result from the effect of the STPO, which had concentrations greater than 100 mg/L throughout the year.

Nitrate was measured at each location during each of the sampling rounds. Concentrations were typically lowest (<0.2 mg/L) in Winter and highest in Spring (>3 mg/L). Downstream concentrations were 10-20% higher than upstream in Winter, but this could result from the effect of the STPO, which had concentrations greater than 8 mg/L throughout the year.

Phosphate was measured at each location during each of the sampling rounds. Phosphate was not detected in PCU, but was reported in PCD in Spring and Summer at concentrations below 0.1 mg/L. This could result from the effect of the STPO, which had concentrations greater than 2 mg/L throughout the year. No significant difference between upstream and downstream concentrations was noted in Winter.

Sulfate was measured at each location during each of the sampling rounds. Concentrations were lowest (<24 mg/L) in Winter and highest in Spring and Summer

(>30 mg/L). Reported results from upstream and downstream samples were generally the same.

Calcium (data is reported under the Metals tables) was measured at each location during each of the sampling rounds. Concentrations were lowest (<19,000 mg/L) in Winter and highest in Spring and Summer (>31,000 mg/L). No significant differences were noted between upstream and downstream concentrations.

Magnesium (data is reported under the Metals tables) was measured at each location during each of the sampling rounds. Concentrations were lowest (<25,000 mg/L) in Winter and highest in Spring and Summer (>39,000 mg/L). No significant differences were noted between upstream and downstream concentrations.

Potassium (data is reported under the Metals tables) was measured at each location during each of the sampling rounds. Concentrations were typically lowest (<1,400 mg/L) in Winter and highest in Spring (>1,800 mg/L). Downstream concentrations were approximately 10-20% higher than upstream in Spring and Summer, but this may be an effect of the STPO, which had concentrations greater than 7,000 mg/L throughout the year. No significant differences were noted between upstream and downstream concentrations during Winter.

Sodium (data is reported under the Metals tables) was measured at each location during each of the sampling rounds. Concentrations were typically lowest (<11,000 mg/L) in Winter highest in Spring (>30,000 mg/L). Downstream concentrations were approximately 10-20% higher than upstream in Spring and Summer, but this could result from the effect of the STPO, which had concentrations greater than 148,000 mg/L throughout the year. No significant differences were noted between upstream and downstream concentrations during Winter.

Total Dissolved Solids was measured at each location during each of the sampling rounds. Concentrations were lowest (<200 mg/L) in Winter and highest in Spring and Summer (>330 mg/L). No significant differences were noted between upstream and downstream concentrations.

Total Organic Carbon was measured at each location during each of the sampling rounds. Seasonal trends were not obvious in this constituent. Furthermore, PCU concentrations were different than PCD for each round (non-detect vs. 3.6 mg/L in Fall, 3.92 vs. 6.6 in Spring). This may be an effect of the STPO, which had concentrations greater than PCD during each round.

A4.1.2 Aquatic Toxicity

Water samples were collected from PCU and PCD during each round to undergo aquatic toxicity tests. These tested the survival and growth rates of larval fathead minnows, the growth rate of selenastrum algae, and the survival and growth rates of newborn ceriodaphnia water fleas. All tests were done with 100% concentration of the creek water.

The aquatic toxicity analysis tested the survival of larval fathead minnows, using 100% concentration of the creek water; no dilution tests were required. Survival was not significantly different than control (100% survival) for LF-1, LF-3, and LS-1.

Winter: Only survival of fathead minnows was required. Survival was not significantly different than control (100% survival) for both PCU and PCD.

Spring: All three species were tested. Samples from PCU and PCD reported survival and reproduction rates for ceriodaphnia that were not significantly different than the laboratory control. For PCU samples, survival and growth rates for fathead minnows and cell growth for selenastrum algae were not significantly different than the control sample. However, for PCD samples, fathead minnow survival was 78% of the control rate and selenastrum algae growth was 82% of the control.

Summer: All three species were tested. Growth, survival and reproduction rates were not significantly different than control for both PCU and PCD.

Fall: The Revised FSP, implemented last year, calls for surface water sampling to coincide with storm water sampling. No storm water samples were collected during the Fall quarter, therefore no aquatic toxicity samples were collected.

A4.1.3 Metals

Twenty metals were analyzed at each location during each of the sampling rounds. Many of these metals occur naturally in surface water at various concentrations. Discussion of results will be limited to PCU and PCD, unless results from STPO indicate possible effects on downstream concentrations.

Antimony was not detected at either PCU or PCD.

Arsenic was detected only in Spring at both PCU and PCD at similar concentrations (<5 µg/L).

Barium was detected each round at both PCU and PCD at similar concentrations. Concentrations were lowest (<50 µg/L) in Winter and highest in Spring (>100 µg/L).

Beryllium was detected only at PCU during Summer at 0.04 µg/L and was not detected at PCD.

Cadmium was detected only at PCU during Summer at 0.08 µg/L and was not detected at PCD.

Chromium was detected only in Spring and Summer at both PCU and PCD at similar concentrations (<6.5 µg/L).

Hexavalent Chromium was not detected at either PCU or PCD.

Cobalt was detected only in Summer at both PCU and PCD at similar concentrations (<0.3 µg/L).

Copper was detected only in Summer at PCU and in Winter and Summer at PCD at levels below 2 µg/L. The STPO concentration of greater than 8 µg/L could account for the Winter detection in PCD.

Iron was detected only in Summer at both PCU and PCD at similar concentrations (>230 µg/L). Iron was not detected during Winter and Spring (at a detection limit of <25 µg/L).

Lead was not detected at either PCU or PCD.

Manganese was detected at PCU and PCD during each round. Reported concentrations were similar except for Winter when PCD was approximately twice the concentration of PCU (14.1 µg/L vs. 6.9 µg/L). Reported STPO concentrations for the Winter quarter were 6.6 µg/l.

Mercury was not detected at either PCU or PCD.

Molybdenum was detected at PCU and PCD during Spring and Summer. Concentrations were lowest (<1.4 µg/L) in Summer and highest in Spring (>2.1 µg/L).

Nickel was detected each round at both PCU and PCD at similar concentrations. Concentrations were lowest (<1.5 µg/L) in Spring and highest in Winter (>2.2 µg/L).

Selenium was not detected at either PCU or PCD.

Silver was not detected at either PCU or PCD.

Thallium was detected only at PCU in Summer at 0.07 µg/L.

Vanadium was detected at PCU and PCD during each round. Concentrations were typically lowest (<2.5 µg/L) in Winter and highest in Spring (>6.4 µg/L). PCD concentration was approximately 20% higher than PCU in Summer, but this could be due to the STPO, which had concentrations greater than 16 µg/L at that time. No significant differences were noted between PCU and PCD concentrations during Winter and Spring.

Zinc was detected at PCU and PCD only during Summer at less than 6 µg/L. PCD concentration was approximately 20% higher than PCU, but this could be due to the STPO, which had concentrations greater than 28 µg/L at that time.

A4.1.4 Pesticides and PCBs

Pesticides and PCBs were analyzed at each location during each of the sampling rounds. Only one compound was detected in either PCU or PCD during 1998. 4,4 – DDT was detected only at PCU during the Summer at 0.0023 µg/L.

A4.1.5 Volatile Organic Compounds

Volatile Organic Compounds were tested for at each location during each of the sampling rounds. The following compounds were the only ones detected in either PCU or PCD.

Bromodichloromethane was detected only in Summer at PCD at 0.44 µg/L. This is likely due to the STPO, which had a reported concentration of 18.3 µg/L at that time. There were no detections at PCU.

Chloroform was detected only in Summer at PCD at 0.79 µg/L. This is likely due to the STPO, which had a reported concentration of 21.4 µg/L at that time. There were no detections at PCU.

Toluene was detected at PCU and PCD only during Spring at less than 0.2 µg/L. The reported PCD concentration was approximately 20% higher than PCU, but this could be due to the STPO, which had a concentration of 0.44 µg/L at that time.

A4.1.6 Radionuclides

Carbon-14, Radium-226, and Strontium-90 were analyzed at PCD (but not at PCU or STPO) during each sampling round. These are specific radionuclide analyses. Each of these radionuclides occurs in the environment at various levels, either naturally or because of fallout from nuclear tests. In addition, the generic analyses for Gross Alpha (which tests for any alpha-emitting radionuclide), Gross Beta (which tests for any beta-

emitting radionuclide, except tritium) and Gamma Spectrometry (which tests for gamma-emitting radionuclides) were tested for at only PCD during each sampling round. It should be noted that gamma spectrometry often has variable results and is considered as a more qualitative than quantitative analysis. Tritium was the only radionuclide analyzed at each location: PCU, PCD, and STPO.

The detections listed below have been selected from the data results by having met two conditions: the results must exceed the minimum detectable activity (MDA) of the measuring equipment, and the error associated with the result must be less than the result itself. Complete data tables for all tested radionuclides, including detection limits, MDAs, analytical results, and data quality notations, can be found in Appendix B.

Radium-226 was detected at PCD in Winter and Summer at less than 0.5 pCi/L.

Gross Alpha was detected at PCD in Summer at 1.45 pCi/L.

Gross Beta was detected at PCD in Winter and Summer at less than 2 pCi/L.

Bismuth-214 was detected by gamma spectrometry at PCD in Winter at 8.59 pCi/L. This radionuclide is a daughter of Radium-226 and is also a naturally occurring radionuclide in surface waters.

Cesium-137 was detected by gamma spectrometry at PCD in Winter at between 1.74 (the original sample) and 8.84 pCi/L (a field duplicate taken at the same time). This is an example of the variability of gamma spectrometry. Cesium is also widespread in the environment due to fallout from nuclear tests.

A4.2 Stormwater Monitoring Program

Stormwater samples were collected in February 1998 associated with sampling for the 1997/1998 rainy season. No samples were collected in Fall 1998 due to insufficient runoff. Stormwater samples were drawn from three locations: a ditch that drains the area of Landfill 1 (called LF-1); a ditch that drains the area of Landfill 3 (called LF-3); and a sump that collects the runoff from the western portion of the former LEHR site (called LS-1). Duplicate field samples were taken at LF-1.

This summary compares storm water sample results to the upstream Putah Creek (PCU) analytical results. Complete data tables for all constituents, including detection limits, analytical results, and data quality notations, can be found in Appendix B.

A4.2.1 General Chemicals

General chemical parameters include alkalinity (as CaCO₃), hardness, anions (chlorides, nitrate, phosphate, and sulfate), cations (calcium, magnesium, potassium, and sodium), total dissolved solids, and total organic carbon. All of the concentrations of the general chemicals were similar to or lower than those for PCU (1,220-1,860 µg/L), except for potassium at LF-1 (8,800 µg/L) and LF-3 (13,200 µg/L).

A4.2.2 Aquatic Toxicity

The aquatic toxicity analysis tested the survival of larval fathead minnows, using 100% concentration of the storm water; no dilution tests were done. Survival was not significantly different than control (100% survival) for LF-1, LF-3, and LS-1.

A4.2.3 Metals

Twenty metals were analyzed from samples collected at each location. Many of these metals occur naturally in the environment at various concentrations. Only those metals with concentrations different than PCU are discussed below. Complete data tables for all constituents, including detection limits, analytical results, and data quality notations, can be found in Appendix B.

Antimony was detected only at LS-1 at 13.6 µg/L. Antimony is not typically found in PCU.

Cobalt was detected at LF-1 and LF-3 up to 5 µg/L while PCU was less than 1 µg/L.

Copper was detected at LF-1 (3.3 µg/L) and LF-3 (3.8 µg/L). The reported concentration at PCU for copper was 1.4 µg/L.

Iron was detected at LF-3 at 375 µg/L while PCU iron concentrations during Summer sampling was 240 µg/L.

Lead was detected only at LF-1 at up to 3.6 µg/L (the duplicate sample was 1.5 µg/L). Lead is not typically reported above detection limits in PCU.

Manganese was detected at LF-1, LF-3, and LS-1 at up to 56.9 µg/L while PCU was less than 10 µg/L.

Nickel was detected at LF-3 at 14.2 while PCU was less than 6 µg/L.

Zinc was detected at LF-1, LF-3, and LS-1 at up to 20 µg/L while PCU was less than 5 µg/L.

A4.2.4 Pesticides and PCBs

Two pesticide compounds were detected in storm water. LS-1 was not tested for pesticides and PCBs.

4,4 –DDE was detected at LF-1 and LF-3 at less than 0.015 µg/L.

Dieldrin was detected at LF-1 and LF-3 at 0.016 µg/L.

A4.2.5 Volatile Organic Compounds

The compounds **1,1-dichloroethene, 1,3 –dichlorobenzene, 1,4-dichlorobenzene, 2-butanone, benzene, chlorobenzene, tetrachloroethene, toluene, and trichloroethene** were all detected at LF-1 at concentrations of 1 µg/L or less. **2-butanone** was detected at LF-3 at 1.9 µg/L.

Acetone (5.9 µg/L) and **methylene chloride** (1.3 µg/L) were detected at LS-1.

A4.2.6 Radionuclides

Analysis for tritium, carbon-14, radium-226, and strontium-90 was performed for samples collected at each storm water location. These are specific radionuclide analyses. Each of these radionuclides occurs in the environment at various levels, either naturally or because of fallout from nuclear tests. In addition, the generic analyses for Gross Alpha (which tests for any alpha-emitting radionuclide), Gross Beta (which tests for any beta-emitting radionuclide, except tritium) and Gamma Spectrometry (which tests for gamma-emitting radionuclides) were also tested from samples collected at each location.

The detections listed below have been selected from the data results by having met two conditions: the results must exceed the minimum detectable activity (MDA) of the measuring equipment, and the error associated with the result must be less than the result itself. Complete data tables for all tested radionuclides, including detection limits, MDAs, analytical results, and data quality notations, can be found in Appendix B.

Tritium was detected at LF-1 at 282 pCi/L.

Radium-226 was detected at LF-3 at 0.184 pCi/L.

Gross Beta was detected at all storm water locations at less than 13 pCi/L.

Lead-212 was detected by gamma spectrometry at LS-1 at 10pCi/L. This radionuclide is a part of the naturally occurring Thorium series.

Uranium-238 and **thorium-234** were each detected in LS-1 at 193 pCi/L. These radionuclides were detected by gamma spectrometry and are part of the naturally-occurring Uranium Series.

A5.0 1998 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

This section presents the results of quality assurance and data evaluation activities conducted for the 1998 water monitoring program. The QA/QC program for the 1998 groundwater, surface water, and storm water monitoring was implemented during the first two quarters in accordance with the *Draft Revised Quality Assurance Project Plan* (QAPjP, Dames & Moore, 1997) and in subsequent quarters, in accordance with the *Final Revised QAPjP* (Dames & Moore, 1998b). Included in the QAPjP are sections identifying quality control sample collection requirements and specified data quality objectives (DQOs) for the measurement data. The primary quality control features of the QA/QC program include the collection and analysis of travel blanks and duplicate water samples, laboratory quality control sample analysis, and data validation.

A5.1 Analytical Program

Table A-2 summarizes the completed chemical and radiological analyses of groundwater, surface water, and storm water for 1998. Analytical methods required for water samples are defined in Table 8 of the *Revised Field Sampling Plan* (Dames & Moore, 1998a). Samples were collected according to procedures described in Section 6.0 of the Field Sampling Plan.

During 1998, General Engineering Laboratories in Charleston, South Carolina performed most sample analyses. During the Fall quarter, samples for volatile organic compounds were sent to Quanterra Incorporated in Missouri. Bioassay testing for surface and storm water was performed in the Winter quarter by Aquatic Testing Laboratory in Ventura, California. Spring surface water samples were analyzed by Aqua-Science Laboratory in Davis, California, and the Aquatic Toxicity Laboratory at UC Davis analyzed Summer surface water samples.

An audit of the General Engineering Laboratories facility in Charleston was conducted on October 15 and 16, 1998 to evaluate the laboratory's compliance with QA requirements specified in the method documents and laboratory plans, and to determine the ability of the lab to perform analytical services for the University of California, Davis. Two findings and three observations of significance were identified as a result of the audit. The laboratory provided corrective action responses including evidence of resolution.

A5.2 Data Validation

Data validation was performed by Dames & Moore in compliance with the QAPjP using protocols consistent with the *USEPA National Functional Guidelines for Data Review*

(EPA, 1994a and 1994b). The purpose of data validation is to assess the ability of the analytical data to serve their intended use. A data assessment summary for the 1998 groundwater, surface water, and storm water program is presented in Section A5.2.2. An evaluation of the data quality for the Winter, Spring, and Summer sampling events has been provided in each respective quarterly monitoring report (UC Davis, 1998, 1999a, and 1999b). The Fall 1998 Field Quality Control Program is presented in Section A5.2.2.1, and the results of the data validation for the Fall quarter are presented in Section A5.2.2.2. Data validation flags have been applied to those sample results that fell outside of specified tolerance limits and, therefore, did not meet the program's quality assurance objectives. An explanation of the data qualifiers is presented in Appendix B.

A5.2.1 1998 Data Assessment Summary

Data quality for the 1998 groundwater, surface water, and storm water was evaluated using travel blanks, field duplicates, laboratory quality control sample analysis, and data validation. In general, 1998 quality control results were satisfactory. The most significant 1998 findings are reviewed below:

- Common laboratory contaminants, including acetone and methylene chloride, were reported frequently in travel blanks or laboratory method blanks. Similar detections in the samples are likely due to analytical processes or laboratory supplies. Most of these data have been qualified (U) indicating bias due to extraneous contamination.
- Some difficulty in instrument calibration was noted for VOC and SVOC analyses, resulting in rejection or qualification of detection limits for a limited number of data points. The calibration was conducted in accordance with the method, and minimum criteria was met for these analytes. However, validation guidelines are based on stricter acceptance windows, which these sample results did not achieve. Based on communication regarding validation guidelines, corrective measures were taken by the laboratory to optimize the instrument conditions to meet the stricter criteria, however some difficulties continued to be reflected in data qualifications.
- Field duplicate results indicate that the samples were collected using representative sampling techniques, and that laboratory procedures yielded reproducible data. Some duplicate imprecision was noted in Fall quarter for the analytes, magnesium, zinc, total organic carbon and chloride.
- A number of pesticide results in Winter, Spring and Summer quarters were deemed unreliable due to failed confirmation analysis. For these results, the presence of the reported compound could not be confirmed.

- On occasion, holding times were exceeded during the year for hexavalent chromium and nitrate as nitrogen. These analytes have very short holding times from the point of sample collection (24 hours for hexavalent chromium and 48 hours for nitrate as nitrogen). Most exceedences occurred as a result of delays in courier service.

Approximately 19,800 analytical results were validated in 1998 in accordance with procedures outlined in the QAPjP. Results of the validation indicate that over 98% of these results were accepted and less than 2% were rejected. This meets the minimum completeness objective of 95% reliable data for water samples analyzed.

A5.2.2 Data Quality Evaluation for Fall Quarter 1998

The QA/QC program for the Fall Quarter 1998 groundwater monitoring was implemented in accordance with the *Final Revised Quality Assurance Project Plan* (QAPjP, Dames & Moore, 1998). Included in the QAPjP are sections identifying quality control sample collection requirements and specified data quality objectives (DQOs) for the measurement data. The primary quality control features of the QA/QC program include the collection and analysis of travel blanks and duplicate water samples, laboratory quality control sample analysis, and data validation. A discussion of each of the QA/QC samples collected during the Fall Quarter 1998 is presented in Section C.1. The results of the data validation are presented in Section C.2. A data assessment summary is presented in Section C.3.

Appendix A presents the data for the Fall Quarter 1998 groundwater monitoring program. Data validation flags have been applied to those sample results that fell outside of specified tolerance limits and, therefore, did not meet the program's quality assurance objectives. An explanation of the data qualifiers is presented at the end of this appendix.

A5.2.2.1 Field Quality Control Program

Quality control samples collected in the field and submitted for analysis included 2 duplicate samples to assess precision and representativeness, and daily travel blank samples analyzed only for volatile organic compounds to identify contaminants which may have been introduced during sample transit or during sample storage at the laboratory. The laboratory analyzed a method blank and a method blank spike for each analytical batch to detect reagent contamination and proper instrument performance, and associated matrix spike analysis to determine any matrix interferences associated with the analytical results. The results of field quality control samples are presented below.

- Acetone and methylene chloride are common laboratory contaminants and were detected in many travel blanks. Similar detections have been qualified as anomalous

(U) in all groundwater and surface water samples. In addition, chloromethane was detected in travel blanks collected on 11/4/98 and 11/5/98, respectively. No detections of these compounds were made in associated samples. In addition, toluene was detected in the travel blank collected on 11/4/98. Neither chloromethane, bromomethane, chloroform, nor toluene are considered common laboratory contaminants. Qualification was required for toluene in samples UCD1-4, UCD1-25, UCD2-15, and UCD2-17.

- Groundwater samples from UCD1-28 and UCD2-7 were collected in duplicate and analyzed by the laboratory. The duplicate groundwater samples yielded similar results for all parameters except manganese, zinc, total organic carbon, and chloride, indicating representative sampling techniques. Dissimilar results were noted for these exceptions in UCD10-28. These results have been appropriately qualified as estimated.
- Groundwater samples from UCD2-36 were designated on the chain-of-custody for matrix spike analyses. Additionally, groundwater samples from UCD2-7, UCD1-10, UCD1-12, UCD1-13, UCD2-14, UCD2-16, UCD2-17, UCD1-28, UCD2-29, UCD2-32, UCD2-37, UCD2-40, UCD4-41, and UCD4-43, were among those used for other matrix spike analyses. Relative percent differences for heptachlor, gamma-BHC, aldrin, endrin, and 4,4'-DDT did not meet acceptance criteria for precision in sample UCD1-28. No qualifications were necessary. The iron and 4-nitrophenol percent recoveries did not meet the acceptance criteria for accuracy in samples UCD2-36 and UCD2-37, respectively. Associated results were qualified as estimated. All other recoveries for spiked compounds in each of the samples were within acceptance limits established by the method.

These quality control results suggest little matrix interferences from these analyses.

A5.2.2.2 Data Validation

Data validation was performed in compliance with the final *Revised QAPjP*, using protocols consistent with the *USEPA National Functional Guidelines* (EPA, 1994). The purpose of data validation is to assess the ability of the analytical data to serve their intended use.

The data packages for the Fall Quarter 1998 groundwater monitoring program included 36 water samples and 6 travel blanks collected November 2 through 10, 1998. Each sample was analyzed for the suite of analyses presented in the *Final FSP* (Dames & Moore, 1998). Data from each of the analyses were evaluated in the following areas based on criteria presented in the standard operating procedures that are included in the final *Revised QAPjP*.

- Data Completeness

- Holding times
- Initial and continuing Calibrations
- Blanks
- System Monitoring Compounds (surrogates – organic analyses only)
- Internal Standards (where applicable)
- Laboratory Control Standards
- Matrix Spike/Matrix Spike or Sample Duplicates
- Field Duplicates
- Compound identification and Quantitation
- Raw Data and Calculations

Data validation flags have been added to those data that did not meet acceptance criteria. These qualified data are presented along with all the data results in Appendices A and B.

A5.2.2.3 Data Assessment Summary

The following information is provided to summarize the data validation review. If appropriate, there is an explanation of irregularities, where the results were further considered to evaluate potential impacts on data quality and usability. Data qualified as estimated (J/UJ) exhibited some bias during analysis and should be considered an approximate measure of the respective analyte concentration. Data qualified as anomalous (U) should be considered a non-detect, given the adjusted reporting limit. Data qualified as rejected (R) are not useful in determining the presence or absence of the respective analyte. A total of 4,400 analytical results were validated according to procedures outlined in the draft Revised QAPjP. Results of the validation indicate that more than 98% of the results were accepted and less than 2% were rejected.

Groundwater

Some difficulty in instrument calibration was noted during VOC analysis warranting qualification. In accordance with the method, the minimum criteria were met for these analyses. However, validation guidelines are based on stricter acceptance windows, which these sample results did not achieve. Corrective measures have been taken by the laboratory to optimize the instrument conditions to meet the stricter criteria; however, some difficulties are still encountered. Calibration difficulties were demonstrated by low correlation coefficients for acetone, 2-butanone, bromomethane, chloroethane, 2-hexanone, carbon disulfide, 4-methol-2-pentanone, 1,2-dibromo-3-chloropropane, trans-1,2-dichloroethene, methylene chloride, and cis-1,2-dichloroethene. Detection limits for

acetone were rejected (R) in all samples. The detection limits for bromomethane, chloroethane, and 2-hexanone were rejected (R) in samples UCD1-12, UCD4-40, and UCD4-41. Detection limits for 2-butanone were qualified as rejected (R) in samples UCD1-4, UCD1-10, UCD1-13, UCD1-25, UCD2-7, UCD2-14, UCD2-15, UCD2-17, UCD2-26, and UCD2-37. Detection limits for chloroethane were qualified as estimated (UJ) in samples UCD1-4, UCD1-10, UCD1-13, UCD1-25, UCD2-7, UCD2-14, UCD2-15, UCD2-16, UCD2-17, UCD2-26, and UCD2-37. Detection limits for carbon disulfide were qualified as estimated (UJ) in all samples except UCD4-41. Detection limits for 4-methyl-2-pentanone were qualified as estimated (UJ) in samples UCD1-4, UCD1-10, UCD1-12, UCD1-13, UCD1-25, UCD2-7, UCD2-14, UCD2-15, UCD2-16, UCD2-17, UCD2-26, UCD2-37, UCD4-42, and UCD4-43. Detection limits for 1,2-dibromo-3-chloropropane were qualified as estimated (UJ) for samples UCD1-4, UCD1-13, UCD1-25, UCD2-7, UCD2-14, UCD2-15, UCD2-16, UCD2-17, UCD2-26, and UCD2-27. Detection limits for trans-1,2-dichloroethene were qualified as estimated (UJ) in samples UCD1-25, UCD2-16, UCD2-17, and UCD2-26. Detection limits for methylene chloride were qualified as estimated (UJ) in samples UCD1-12, UCD1-28, UCD2-16, UCD2-17, UCD2-26, UCD2-29, UCD2-30, UCD2-31, UCD2-32, UCD2-35, UCD2-36, UCD2-38, UCD2-39, UCD2-40, UCD4-42, and UCD4-43. Detection limits for cis-1,3-dichloroethene were qualified as estimated (UJ) in samples UCD1-4, UCD1-13, UCD1-25, UCD2-7, UCD2-14, UCD2-15, and UCD2-37. Calibration difficulties were also noted during semivolatile analysis for 2,4-dinitrophenol. Detection limits have been qualified as estimated (UJ) in samples UCD2-17, UCD2-37, UCD4-41, UCD4-42, and UCD4-43. In addition, the detection of 4,4'-DDT in sample UCD2-40 was qualified as estimated (J) due to calibration difficulties. Copper detections were qualified as estimated (J) in samples UCD2-16 and UCD2-37.

Low-level blank contamination was widespread in VOC and metals results. For VOCs the reported detections of methylene chloride in all samples except UCD2-14 and UCD4-41 have been qualified as anomalous (U) due to associated method blank contamination. Methylene chloride is a common laboratory contaminant, and similar detections in the samples are likely due to analytical processes or laboratory supplies. The vinyl chloride detection in sample UCD4-41 has been qualified as anomalous (U) due to associated method blank contamination. Metals were also qualified due to blank contamination. Data were qualified as anomalous (U) for antimony in samples UCD1-28, UCD2-14, UCD2-16, UCD2-29, UCD2-30, UCD2-31, UCD2-32, UCD2-36, UCD2-37, UCD2-38, UCD2-39, UCD2-40, UCD4-41, cadmium in sample UCD4-41, manganese in sample UCD1-28, UCD2-14, UCD2-16, UCD2-29, UCD2-30, UCD2-31, UCD2-32, UCD2-36,

UCD2-37, UCD2-38, UCD2-39, and UCD2-40, molybdenum in sample UCD1-28, thallium in sample UCD4-42, and vanadium in samples UCD1-28, UCD2-30, UCD2-36, and UCD2-40. These levels of contamination are well below established contract reporting limits. Matrix interferences were noted for iron and 4-nitrophenol in samples UCD2-36 and UCD2-37, respectively. Associated results were qualified as estimated.

For pesticides, one result has been rejected (R) due to a failed confirmation analysis. 4,4'-DDE was rejected (R) in UCD4-43. Surrogate recoveries fell below control limits during pesticide analysis for UCD1-12, UCD1-13, UCD1-28, UCD2-14, UCD2-29, UCD2-30, UCD2-31, UCD2-36, UCD2-37, UCD2-38, Ucd4-41, UCD4-42, and UCD4-43. Associated compound detection limits in these samples have been qualified as estimated (UJ) due to the low bias indicated.

For radiochemicals, sample results were qualified as estimated (UJ) if the sample result was less than the MDA, and the sample result added to the uncertainty exceeded the MDA. Sample results were qualified as estimated (J) if the sample result was greater than the MDA, and the sample result less the uncertainty was below the MDA. The uncertainty represents the 95% confidence interval for the quantitative result. The accuracy of strontium-90 in a single laboratory control sample fell below the lower control limit indicating a low bias for this activity in samples UCD1-4, UCD1-13, UCD1-28, UCD2-14, UCD1-15, UCD2-29, UCD2-30, UCD2-31, UCD2-32, UCD2-36, UCD2-37, UCD2-38, UCD2-39, and UCD2-40. The associated detection limits were qualified as estimated (UJ). In addition, low recoveries were reported for heptachlor and 4,4'-DDT. Detection limits were qualified as estimated (UJ) in samples UCD1-4, UCD1-13, UCD2-14, UCD2-15, UCD2-32, UCD2-36, UCD2-37, UCD2-38, and UCD2-39.

A6.0 REFERENCES

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APPENDIX A

TABLES

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-01	01/22/98	50.05	34.27	15.78
	02/17/98	50.05	20.46	29.59
	03/19/98	50.05	17.06	32.99
	04/21/98	50.05	17.66	32.39
	05/19/98	50.05	22.83	27.22
	06/16/98	50.05	24.41	25.64
	07/22/98	50.05	36.87	13.18
	08/18/98	50.05	39.89	10.16
	09/15/98	50.05	39.25	10.80
	10/21/98	50.05	34.85	15.20
	11/20/98	50.05	32.10	17.95
	12/09/98	50.05	30.61	19.44
UCD1-03	01/22/98	50.05	34.26	15.79
	02/17/98	50.05	20.17	29.88
	03/19/98	50.05	17.16	32.89
	04/21/98	50.05	17.82	32.23
	05/19/98	50.05	22.98	27.07
	06/16/98	50.05	24.58	25.47
	07/22/98	50.05	37.00	13.05
	08/18/98	50.05	40.49	9.56
	09/15/98	50.05	39.99	10.06
	10/21/98	50.05	35.40	14.65
	11/20/98	50.05	32.56	17.49
	12/09/98	50.05	31.20	18.85
UCD1-04	01/22/98	51.69	35.21	16.48
	02/17/98	51.69	18.50	33.19
	03/19/98	51.69	18.75	32.94
	04/21/98	51.69	19.64	32.05
	05/19/98	51.69	24.29	27.40
	06/16/98	51.69	25.50	26.19

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

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Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-04	07/22/98	51.69	36.74	14.95
	08/18/98	51.69	40.45	11.24
	09/15/98	51.69	40.20	11.49
	10/21/98	51.69	36.22	15.47
	11/20/98	51.69	33.61	18.08
	12/09/98	51.69	32.10	19.59
UCD1-05	01/22/98	48.44	32.70	15.74
	02/17/98	48.44	18.73	29.71
	03/19/98	48.44	15.54	32.90
	04/21/98	48.44	18.10	30.34
	05/19/98	48.44	21.31	27.13
	06/16/98	48.44	22.89	25.55
	07/22/98	48.44	35.17	13.27
	08/18/98	48.44	38.51	9.93
	09/15/98	48.44	38.00	10.44
	10/21/98	48.44	33.55	14.89
	11/20/98	48.44	30.81	17.63
	12/09/98	48.44	29.20	19.24
UCD1-06	01/22/98	50.94	35.04	15.90
	02/17/98	50.94	19.98	30.96
	03/19/98	50.94	17.82	33.12
	04/21/98	50.94	19.45	31.49
	05/19/98	50.94	23.64	27.30
	06/16/98	50.94	25.11	25.83
	07/22/98	50.94	37.05	13.89
	08/18/98	50.94	40.57	10.37
	09/15/98	50.94	40.02	10.92
	10/21/98	50.94	35.90	15.04
	11/20/98	50.94	33.05	17.89
	12/09/98	50.94	31.50	19.44

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Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-08	01/22/98	51.51	36.25	15.26
	02/17/98	51.51	22.04	29.47
	03/19/98	51.51	18.86	32.65
	04/21/98	51.51	19.67	31.84
	05/19/98	51.51	24.36	27.15
	06/16/98	51.51	25.85	25.66
	07/22/98	51.51	38.00	13.51
	08/18/98	51.51	41.96	9.55
	09/15/98	51.51	41.60	9.91
	10/21/98	51.51	37.18	14.33
	11/20/98	51.51	34.25	17.26
	12/09/98	51.51	32.81	18.70
UCD1-09	01/22/98	51.38	36.17	15.21
	02/17/98	51.38	23.34	28.04
	03/19/98	51.38	18.82	32.56
	04/21/98	51.38	19.52	31.86
	05/19/98	51.38	24.41	26.97
	06/16/98	51.38	26.10	25.28
	07/22/98	51.38	38.88	12.50
	08/18/98	51.38	42.45	8.93
	09/15/98	51.38	41.91	9.47
	10/21/98	51.38	37.10	14.28
	11/20/98	51.38	34.25	17.13
	12/09/98	51.38	32.79	18.59
UCD1-10	01/22/98	49.87	35.03	14.84
	02/17/98	49.87	17.90	31.97
	03/19/98	49.87	17.39	32.48
	04/21/98	49.87	18.56	31.31
	05/19/98	49.87	24.27	25.60
	06/16/98	49.87	26.32	23.55

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LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-10	07/22/98	49.87	40.10	9.77
	08/18/98	49.87	42.71	7.16
	09/15/98	49.87	41.73	8.14
	10/21/98	49.87	36.36	13.51
	11/20/98	49.87	33.32	16.55
	12/09/98	49.87	31.79	18.08
UCD1-11	01/22/98	50.67	35.61	15.06
	02/17/98	50.67	22.28	28.39
	03/19/98	50.67	18.38	32.29
	04/21/98	50.67	19.14	31.53
	05/19/98	50.67	24.50	26.17
	06/16/98	50.67	26.18	24.49
	07/22/98	50.67	39.17	11.50
	08/18/98	50.67	42.43	8.24
	09/15/98	50.67	41.74	8.93
	10/21/98	50.67	36.68	13.99
	11/20/98	50.67	33.73	16.94
	12/09/98	50.67	32.24	18.43
UCD1-12	01/22/98	51.76	36.56	15.20
	02/17/98	51.76	23.78	27.98
	03/19/98	51.76	19.24	32.52
	04/21/98	51.76	19.94	31.82
	05/19/98	51.76	24.83	26.93
	06/16/98	51.76	26.55	25.21
	07/22/98	51.76	39.36	12.40
	08/18/98	51.76	42.90	8.86
	09/15/98	51.76	42.30	9.46
	10/21/98	51.76	37.49	14.27
	11/20/98	51.76	34.66	17.10
	12/09/98	51.76	37.20	14.56

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

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1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-13	01/22/98	52.19	36.88	15.31
	02/17/98	52.19	22.55	29.64
	03/19/98	52.19	19.54	32.65
	04/21/98	52.19	20.35	31.84
	05/19/98	52.19	25.04	27.15
	06/16/98	52.19	26.47	25.72
	07/22/98	52.19	38.66	13.53
	08/18/98	52.19	42.59	9.60
	09/15/98	52.19	42.19	10.00
	10/21/98	52.19	37.80	14.39
	11/20/98	52.19	34.87	17.32
	12/09/98	52.19	33.47	18.72
UCD1-18	01/22/98	48.56	31.59	16.97
	02/17/98	48.56	13.91	34.65
	03/19/98	48.56	14.68	33.88
	04/21/98	48.56	15.73	32.83
	05/19/98	48.56	20.42	28.14
	06/16/98	48.56	21.55	27.01
	07/22/98	48.56	32.85	15.71
	08/18/98	48.56	36.31	12.25
	09/15/98	48.56	36.16	12.40
	10/21/98	48.56	32.43	16.13
	11/20/98	48.56	29.78	18.78
	12/09/98	48.56	28.47	20.09
UCD1-19	01/22/98	51.33	36.10	15.23
	02/17/98	51.33	24.03	27.30
	03/19/98	51.33	19.08	32.25
	04/21/98	51.33	19.56	31.77
	05/19/98	51.33	24.68	26.65
	06/16/98	51.33	26.44	24.89

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

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LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-19	07/22/98	51.33	39.46	11.87
	08/18/98	51.33	42.50	8.83
	09/15/98	51.33	41.95	9.38
	10/21/98	51.33	36.97	14.36
	11/20/98	51.33	34.15	17.18
	12/09/98	51.33	32.65	18.68
UCD1-20	01/22/98	49.78	33.99	15.79
	02/17/98	49.78	19.88	29.90
	03/19/98	49.78	16.90	32.88
	04/21/98	49.78	17.60	32.18
	05/19/98	49.78	22.73	27.05
	06/16/98	49.78	24.28	25.50
	07/22/98	49.78	36.72	13.06
	08/18/98	49.78	40.22	9.56
	09/15/98	49.78	39.70	10.08
	10/21/98	49.78	35.12	14.66
	11/20/98	49.78	32.25	17.53
	12/09/98	49.78	30.75	19.03
UCD1-21	01/22/98	48.77	33.09	15.68
	02/17/98	48.77	18.99	29.78
	03/19/98	48.77	15.88	32.89
	04/21/98	48.77	16.44	32.33
	05/19/98	48.77	21.57	27.20
	06/16/98	48.77	23.22	25.55
	07/22/98	48.77	35.50	13.27
	08/18/98	48.77	38.89	9.88
	09/15/98	48.77	38.40	10.37
	10/21/98	48.77	33.93	14.84
	11/20/98	48.77	31.17	17.60
	12/09/98	48.77	29.61	19.16

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-22	01/22/98	49.07	NR	NR
	02/17/98	49.07	18.66	30.41
	03/19/98	49.07	16.91	32.16
	04/21/98	49.07	16.56	32.51
	05/19/98	49.07	21.78	27.29
	06/16/98	49.07	22.26	26.81
	07/22/98	49.07	35.24	13.83
	08/18/98	49.07	38.71	10.36
	09/15/98	49.07	38.13	10.94
	10/21/98	49.07	34.01	15.06
	11/20/98	49.07	31.12	17.95
	12/09/98	49.07	29.60	19.47
UCD1-23	01/22/98	49.39	33.10	16.29
	02/17/98	49.39	17.25	32.14
	03/19/98	49.39	16.19	33.20
	04/21/98	49.39	17.06	32.33
	05/19/98	49.39	21.90	27.49
	06/16/98	49.39	23.10	26.29
	07/22/98	49.39	34.91	14.48
	08/18/98	49.39	38.41	10.98
	09/15/98	49.39	38.10	11.29
	10/21/98	49.39	34.03	15.36
	11/20/98	49.39	31.32	18.07
	12/09/98	49.39	29.81	19.58
UCD1-24	01/22/98	48.91	33.42	15.49
	02/17/98	48.91	18.73	30.18
	03/19/98	48.91	15.98	32.93
	04/21/98	48.91	16.75	32.16
	05/19/98	48.91	21.85	27.06
	06/16/98	48.91	23.25	25.66

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-24	07/22/98	48.91	35.44	13.47
	08/18/98	48.91	39.36	9.55
	09/15/98	48.91	38.26	10.65
	10/21/98	48.91	34.36	14.55
	11/20/98	48.91	31.40	17.51
	12/09/98	48.91	29.88	19.03
UCD1-25	01/22/98	48.80	33.86	14.94
	02/17/98	48.80	21.85	26.95
	03/19/98	48.80	16.84	31.96
	04/21/98	48.80	17.51	31.29
	05/19/98	48.80	23.12	25.68
	06/16/98	48.80	24.94	23.86
	07/22/98	48.80	38.36	10.44
	08/18/98	48.80	41.20	7.60
	09/15/98	48.80	40.45	8.35
	10/21/98	48.80	34.98	13.82
	11/20/98	48.80	31.99	16.81
	12/09/98	48.80	30.55	18.25
UCD1-28	01/22/98	50.45	34.25	16.20
	02/17/98	50.45	21.72	28.73
	03/19/98	50.45	18.13	32.32
	04/21/98	50.45	19.26	31.19
	05/19/98	50.45	25.31	25.14
	06/16/98	50.45	27.25	23.20
	07/22/98	50.34	40.97	9.37
	08/18/98	50.34	43.40	6.94
	09/15/98	50.34	42.35	7.99
	10/21/98	50.34	36.72	13.62
	11/20/98	50.34	33.74	16.60
	12/09/98	50.34	32.24	18.10

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-1				
UCD1-34	01/22/98	55.70	39.20	16.50
	02/17/98	55.70	20.46	35.24
	03/19/98	55.70	23.11	32.59
	04/21/98	55.70	23.93	31.77
	05/19/98	55.70	28.28	27.42
	06/16/98	55.70	29.18	26.52
	07/22/98	55.70	41.14	14.56
	08/18/98	55.70	44.79	10.91
	09/15/98	55.70	44.40	11.30
	10/21/98	55.70	40.31	15.39
	11/20/98	55.70	37.55	18.15
	12/09/98	55.70	36.16	19.54
HSU-2				
EW2-1	01/22/98	50.28	34.26	16.02
	02/17/98	50.28	19.49	30.79
	04/21/98	49.17	19.11	30.06
	05/19/98	49.17	25.00	24.17
	06/16/98	49.17	27.02	22.15
	07/22/98	49.17	41.19	7.98
	08/18/98	49.17	44.30	4.87
	09/15/98	49.17	42.07	7.10
	10/21/98	49.17	36.16	13.01
	11/20/98	49.17	33.07	16.10
	12/09/98	49.17	31.56	17.61
IW2-1	05/19/98	49.39	19.52	29.87
	06/16/98	49.39	24.35	25.04
	07/22/98	49.39	37.35	12.04
	08/18/98	49.39	27.0	22.39
	09/15/98	49.39	18.50	30.89
	10/21/98	49.39	16.78	32.61

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
IW2-1	11/20/98	49.39	29.71	19.68
	12/09/98	49.39	15.60	33.79
UCD2-07	01/22/98	51.65	36.10	15.55
	02/17/98	51.65	22.44	29.21
	03/19/98	51.65	19.12	32.53
	04/21/98	51.65	20.00	31.65
	05/19/98	51.65	25.71	25.94
	06/16/98	51.65	27.31	24.34
	07/22/98	51.65	41.43	10.22
	08/18/98	51.65	43.78	7.87
	09/15/98	51.65	41.86	9.79
	10/21/98	51.65	36.84	14.81
	11/20/98	51.65	33.92	17.73
	12/09/98	51.65	32.45	19.20
UCD2-14	01/22/98	51.72	36.30	15.42
	02/17/98	51.72	22.41	29.31
	03/19/98	51.72	19.31	32.41
	04/21/98	51.72	20.18	31.54
	05/19/98	51.72	26.03	25.69
	06/16/98	51.72	27.43	24.29
	07/22/98	51.72	41.94	9.78
	08/18/98	51.72	44.28	7.44
	09/15/98	51.72	42.18	9.54
	10/21/98	51.72	37.05	14.67
	11/20/98	51.72	34.21	17.51
	12/09/98	51.72	32.75	18.97
UCD2-15	01/22/98	51.49	35.59	15.90
	02/17/98	51.49	21.90	29.59
	03/19/98	51.49	18.70	32.79
	04/21/98	51.49	19.51	31.98

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-15	05/19/98	51.49	24.95	26.54
	06/16/98	51.49	26.80	24.69
	07/22/98	51.49	39.83	11.66
	08/18/98	51.49	42.28	9.21
	09/15/98	51.49	40.96	10.53
	10/21/98	51.49	36.01	15.48
	11/20/98	51.49	33.52	17.97
	12/09/98	51.49	31.90	19.59
UCD2-16	01/22/98	49.95	34.20	15.75
	02/17/98	49.95	20.75	29.20
	03/19/98	49.95	17.34	32.61
	04/21/98	49.95	18.14	31.81
	05/19/98	49.95	23.64	26.31
	06/16/98	49.95	25.26	24.69
	07/22/98	49.95	38.45	11.50
	08/18/98	49.95	41.26	8.69
	09/15/98	49.95	39.81	10.14
	10/21/98	49.95	34.78	15.17
	11/20/98	49.95	32.06	17.89
	12/09/98	49.95	30.57	19.38
UCD2-17	01/22/98	51.83	35.68	16.15
	02/17/98	51.83	22.08	29.75
	03/19/98	51.83	18.79	33.04
	04/21/98	51.83	19.59	32.24
	05/19/98	51.83	24.85	26.98
	06/16/98	51.83	26.43	25.40
	07/22/98	51.83	39.35	12.48
	08/18/98	51.83	41.90	9.93
	09/15/98	51.83	40.67	11.16
	10/21/98	51.83	36.11	15.72

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-17	11/20/98	51.83	33.37	18.46
	12/09/98	51.83	31.94	19.89
UCD2-26	01/22/98	48.79	33.68	15.11
	02/17/98	48.79	19.97	28.82
	03/19/98	48.79	16.76	32.03
	04/21/98	48.79	17.75	31.04
	05/19/98	48.79	23.77	25.02
	06/16/98	48.79	25.43	23.36
	07/22/98	48.79	40.27	8.52
	08/18/98	48.79	42.42	6.37
	09/15/98	48.79	40.36	8.43
	10/21/98	48.79	34.87	13.92
	11/20/98	48.79	31.87	16.92
	12/09/98	48.79	30.38	18.41
UCD2-29	01/22/98	50.43	35.20	15.23
	02/17/98	50.43	21.41	29.02
	03/19/98	50.43	18.28	32.15
	04/21/98	50.43	19.58	30.85
	05/19/98	50.43	25.67	24.76
	06/16/98	50.43	27.76	22.67
	07/22/98	50.32	42.27	8.05
	08/18/98	50.32	44.56	5.76
	09/15/98	50.32	42.37	7.95
	10/21/98	50.32	36.71	13.61
	11/20/98	50.32	33.69	16.63
	12/09/98	50.32	32.16	18.16
UCD2-30	01/22/98	49.94	34.72	15.22
	02/17/98	49.94	20.93	29.01
	03/19/98	49.94	17.79	32.15
	04/21/98	49.94	19.16	30.78

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-30	05/19/98	49.94	25.26	24.68
	06/16/98	49.94	26.97	22.97
	07/22/98	49.83	42.09	7.74
	08/18/98	49.83	44.33	5.50
	09/15/98	49.83	42.05	7.78
	10/21/98	49.83	36.36	13.47
	11/20/98	49.83	33.27	16.56
	12/09/98	49.83	31.78	18.05
UCD2-31	01/22/98	49.98	34.70	15.28
	02/17/98	49.98	21.12	28.86
	03/19/98	49.98	17.83	32.15
	04/21/98	49.98	19.10	30.88
	05/19/98	49.98	25.15	24.83
	06/16/98	49.98	26.86	23.12
	07/22/98	49.86	41.89	7.97
	08/18/98	49.86	44.52	5.34
	09/15/98	49.86	41.93	7.93
	10/21/98	49.86	36.24	13.62
	11/20/98	49.86	33.20	16.66
	12/09/98	49.86	31.69	18.17
UCD2-32	01/22/98	45.42	30.02	15.40
	02/17/98	45.42	26.84	18.58
	03/19/98	45.42	13.99	31.43
	04/06/98	45.42	14.19	31.23
	04/13/98	45.42	14.34	31.08
	04/21/98	45.42	14.93	30.49
	04/28/98	45.42	16.06	29.36
	05/04/98	45.42	18.67	26.75
	05/11/98	45.42	20.07	25.35
	05/19/98	45.42	21.38	24.04

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-32	06/01/98	45.42	18.98	26.44
	06/08/98	45.42	22.71	22.71
	06/16/98	45.42	23.28	22.14
	06/23/98	45.42	27.55	17.87
	06/29/98	45.42	30.21	15.21
	07/07/98	45.41	35.81	9.60
	07/14/98	45.41	36.66	8.75
	07/22/98	45.41	37.58	7.83
	07/29/98	45.41	41.98	3.43
	08/05/98	45.41	41.01	4.40
	08/11/98	45.41	38.75	6.66
	08/18/98	45.41	44.50	0.91
	08/25/98	45.41	39.11	6.30
	09/03/98	45.41	39.56	5.85
	09/09/98	45.41	39.18	6.23
	09/14/98	45.41	38.11	7.30
	09/22/98	45.41	37.16	8.25
	09/28/98	45.41	35.3	10.11
	10/07/98	45.41	33.61	11.80
	10/13/98	45.41	33.18	12.23
	10/21/98	45.41	32.10	13.31
	10/26/98	45.41	31.49	13.92
	11/02/98	45.41	30.62	14.79
	11/10/98	45.41	29.73	15.68
	11/16/98	45.41	29.05	16.36
	11/20/98	45.41	28.93	16.48
	11/23/98	45.41	28.56	16.85
	12/02/98	45.41	27.81	17.60
	12/09/98	45.41	27.35	18.06
	12/15/98	45.41	27.04	18.37

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-32	12/22/98	45.41	26.78	18.63
	12/28/98	45.41	26.45	18.96
UCD2-35	01/22/98	55.71	40.23	15.48
	02/17/98	55.71	26.14	29.57
	03/19/98	55.71	23.17	32.54
	04/21/98	55.71	24.05	31.66
	05/19/98	55.71	29.63	26.08
	06/16/98	55.71	31.15	24.56
	07/22/98	55.71	44.70	11.01
	08/18/98	55.71	47.56	8.15
	09/15/98	55.71	45.82	9.89
	10/21/98	55.71	40.92	14.79
	11/20/98	55.71	NR	NR
	12/09/98	55.71	36.61	19.10
UCD2-36	01/22/98	48.31	32.37	15.94
	02/17/98	48.31	19.20	29.11
	03/19/98	48.31	NR	NR
	04/21/98	48.31	16.63	31.68
	05/19/98	48.31	22.32	25.99
	06/16/98	48.31	24.02	24.29
	07/22/98	48.31	38.18	10.13
	08/18/98	48.31	40.21	8.10
	09/15/98	48.31	38.55	9.76
	10/21/98	48.31	35.42	12.89
	11/20/98	48.31	30.58	17.73
	12/09/98	48.31	29.11	19.20
UCD2-37	01/22/98	49.63	35.95	13.68
	02/17/98	49.63	19.97	29.66
	03/19/98	49.63	16.73	32.90
	04/21/98	49.63	17.55	32.08

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-37	05/19/98	49.63	22.83	26.80
	06/16/98	49.63	24.62	25.01
	07/22/98	49.63	37.61	12.02
	08/18/98	49.63	40.11	9.52
	09/15/98	49.63	38.76	10.87
	10/21/98	49.63	34.17	15.46
	11/20/98	49.63	31.41	18.22
	12/09/98	49.63	29.88	19.75
UCD2-38	01/22/98	57.20	43.65	13.55
	02/17/98	57.20	27.42	29.78
	03/19/98	57.20	24.35	32.85
	04/21/98	57.20	25.17	32.03
	05/19/98	57.20	30.29	26.91
	06/16/98	57.20	32.0	25.20
	07/22/98	57.20	45.32	11.88
	08/18/98	57.20	48.00	9.20
	09/15/98	57.20	46.41	10.79
	10/21/98	57.20	41.65	15.55
	11/20/98	57.20	38.98	18.22
	12/09/98	57.20	37.51	19.69
UCD2-39	01/22/98	49.63	36.49	13.14
	02/17/98	49.63	19.07	30.56
	03/19/98	49.63	17.52	32.11
	04/21/98	49.63	18.44	31.19
	05/19/98	49.63	24.32	25.31
	06/16/98	49.63	26.30	23.33
	07/22/98	49.63	39.66	9.97
	08/18/98	49.63	42.81	6.82
	09/15/98	49.63	40.83	8.80
	10/21/98	49.63	35.48	14.15

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-39	11/20/98	49.63	32.55	17.08
	12/09/98	49.63	31.02	18.61
UCD2-40	01/22/98	48.96	33.54	15.42
	02/17/98	48.96	20.02	28.94
	03/19/98	48.96	17.70	31.26
	04/06/98	48.96	17.52	31.44
	04/13/98	48.96	17.67	31.29
	04/21/98	48.96	18.25	30.71
	04/28/98	48.96	19.29	29.67
	05/04/98	48.96	NR	NR
	05/11/98	48.96	23.26	25.70
	05/19/98	48.96	24.49	24.47
	06/01/98	48.96	22.34	26.62
	06/08/98	48.96	25.89	23.07
	06/16/98	48.96	27.10	21.86
	06/23/98	48.96	30.66	18.30
	06/29/98	48.96	33.12	15.84
	07/07/98	48.98	38.75	10.23
	07/14/98	48.98	39.47	9.51
	07/22/98	48.98	41.73	7.25
	07/29/98	48.98	44.7	4.28
	08/05/98	48.98	44.05	4.93
	08/11/98	48.98	41.85	7.13
	08/18/98	48.98	43.67	5.31
	08/25/98	48.98	44.18	4.80
	09/03/98	48.98	42.59	6.39
	09/09/98	48.98	42.21	6.77
	09/14/98	48.98	41.27	7.71
	09/22/98	48.98	40.43	8.55
	09/28/98	48.98	38.61	10.37

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-2				
UCD2-40	10/07/98	48.98	36.99	11.99
	10/13/98	48.98	36.44	12.54
	10/21/98	48.98	35.47	13.51
	10/26/98	48.98	34.86	14.12
	11/02/98	48.98	34.04	14.94
	11/10/98	48.98	33.15	15.83
	11/16/98	48.98	32.52	16.46
	11/20/98	48.98	32.35	16.63
	11/23/98	48.98	32.04	16.94
	12/02/98	48.98	31.30	17.68
	12/09/98	48.98	30.84	18.14
	12/15/98	48.98	30.54	18.44
	12/22/98	48.98	30.31	18.67
	12/28/98	48.98	29.92	19.06
HSU-4				
UCD4-41	01/22/98	49.35	34.50	14.85
	02/17/98	49.35	22.80	26.55
	03/19/98	49.35	18.08	31.27
	04/06/98	49.35	18.63	30.72
	04/13/98	49.35	18.86	30.49
	04/21/98	49.35	19.33	30.02
	04/28/98	49.35	24	25.35
	05/04/98	49.35	29.28	20.07
	05/11/98	49.35	34.01	15.34
	05/19/98	49.35	33.78	15.57
	06/01/98	49.35	24.14	25.21
	06/08/98	49.35	34.98	14.37
	06/16/98	49.35	33.90	15.45
	06/23/98	49.35	44.26	5.09
	06/29/98	49.35	47.45	1.90

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-4				
UCD4-41	07/07/98	49.37	55.34	-5.97
	07/14/98	49.37	53.78	-4.41
	07/22/98	49.37	61.56	-12.2
	07/29/98	49.37	62.8	-13.4
	08/05/98	49.37	58.54	-9.17
	08/11/98	49.37	52.24	-2.87
	08/18/98	49.37	57.12	-7.75
	08/25/98	49.37	57.49	-8.12
	09/03/98	49.37	48.61	0.76
	09/09/98	49.37	49.2	0.17
	09/14/98	49.37	46.38	2.99
	09/22/98	49.37	45.08	4.29
	09/28/98	49.37	40.82	8.55
	10/07/98	49.37	38.87	10.50
	10/13/98	49.37	39.38	9.99
	10/21/98	49.37	37.06	12.31
	10/26/98	49.37	36.32	13.05
	11/02/98	49.37	35.49	13.88
	11/10/98	49.37	34.47	14.90
	11/16/98	49.37	33.83	15.54
	11/20/98	49.37	33.66	15.71
	11/23/98	49.37	33.26	16.11
	12/02/98	49.37	32.41	16.96
	12/09/98	49.37	31.95	17.42
	12/15/98	49.37	31.87	17.50
	12/22/98	49.37	31.49	17.88
	12/28/98	49.37	30.98	18.39
UCD4-42	01/22/98	47.24	32.71	14.53
	02/17/98	47.24	20.88	26.36
	03/19/98	47.24	16.45	30.79

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-4				
UCD4-42	04/06/98	47.24	16.44	30.80
	04/13/98	47.24	16.62	30.62
	04/21/98	47.24	17.36	29.88
	04/28/98	47.24	21.21	26.03
	05/04/98	47.24	26.2	21.04
	05/11/98	47.24	30.31	16.93
	05/19/98	47.24	29.87	17.37
	06/01/98	47.24	21.91	25.33
	06/08/98	47.24	31.36	15.88
	06/16/98	47.24	30.82	16.42
	06/23/98	47.24	40.06	7.18
	06/29/98	47.24	44.11	3.13
	07/07/98	47.22	51.71	-4.49
	07/14/98	47.22	49.71	-2.49
	07/22/98	47.22	54.32	-7.10
	07/29/98	47.22	59.61	-12.4
	08/05/98	47.22	54.82	-7.60
	08/11/98	47.22	48.97	-1.75
	08/18/98	47.22	53.36	-6.14
	08/25/98	47.22	49.42	-2.20
	09/03/98	47.22	48.26	-1.04
	09/09/98	47.22	46.78	0.44
	09/14/98	47.22	44.0	3.22
	09/22/98	47.22	42.52	4.70
	09/28/98	47.22	38.61	8.61
	10/07/98	47.22	36.63	10.59
	10/13/98	47.22	37.0	10.22
	10/21/98	47.22	34.84	12.38
	10/26/98	47.22	34.11	13.11
	11/02/98	47.22	33.44	13.78

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-4				
UCD4-42	11/10/98	47.22	32.42	14.80
	11/16/98	47.22	31.76	15.46
	11/20/98	47.22	31.61	15.61
	11/23/98	47.22	31.20	16.02
	12/02/98	47.22	30.30	16.92
	12/09/98	47.22	29.82	17.40
	12/15/98	47.22	29.79	17.43
	12/22/98	47.22	29.42	17.80
	12/28/98	47.22	28.89	18.33
UCD4-43	01/22/98	45.00	30.60	14.40
	02/17/98	45.00	19.04	25.96
	03/19/98	45.00	14.77	30.23
	04/06/98	45.00	14.71	30.29
	04/13/98	45.00	14.96	30.04
	04/21/98	45.00	15.71	29.29
	04/28/98	45.00	20.44	24.56
	05/04/98	45.00	25.12	19.88
	05/11/98	45.00	29.2	15.80
	05/19/98	45.00	31.04	13.96
	06/01/98	45.00	20.42	24.58
	06/08/98	45.00	31.1	13.90
	06/16/98	45.00	30.50	14.50
	06/23/98	45.00	41.28	3.72
	06/29/98	45.00	44.78	0.22
	07/07/98	45.06	52.23	-7.17
	07/14/98	45.06	50.6	-5.54
	07/22/98	45.06	55.57	-10.5
	07/29/98	45.06	61.0	-15.9
	08/05/98	45.06	54.47	-9.41
	08/11/98	45.06	49.31	-4.25

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
 NR Not recorded.

TABLE A-1
GROUNDWATER ELEVATION DATA
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION - DAVIS, CALIFORNIA

Well	Date	Well Elevation (MSLD)	Depth to Water (bgs)	Groundwater Elevation (MSLD)
HSU-4				
UCD4-43	08/18/98	45.06	53.62	-8.56
	08/25/98	45.06	51.4	-6.34
	09/03/98	45.06	45.51	-0.45
	09/09/98	45.06	42.26	2.80
	09/14/98	45.06	43.01	2.05
	09/22/98	45.06	41.46	3.60
	09/28/98	45.06	37.16	7.90
	10/07/98	45.06	35.14	9.92
	10/13/98	45.06	36.65	8.41
	10/21/98	45.06	33.25	11.81
	10/26/98	45.06	32.49	12.57
	11/02/98	45.06	31.53	13.53
	11/10/98	45.06	30.48	14.58
	11/16/98	45.06	29.80	15.26
	11/20/98	45.06	29.61	15.45
	11/23/98	45.06	29.21	15.85
	12/02/98	45.06	28.32	16.74
	12/09/98	45.06	27.86	17.20
	12/15/98	45.06	27.83	17.23
	12/22/98	45.06	27.45	17.61
	12/28/98	45.06	26.93	18.13

MSLD Mean Sea Level Datum. bgs - Below Ground Surface.
NR Not recorded.

Table A-2
Current Groundwater Monitoring Parameters and Schedule
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Analyte/Analysis																
	Radiological Analytes									VOCs(b)(d)	SVOCs(c)	Metals(d)	Nitrate(d)	Chromium (hexavalent)(d)	TOC, TDS	Pesticides & PCBs	Alkalinity Cations, Anions
	Gamma(d)	Tritium(d)	C-14(d)	Sr-90(d)	Ra-226(d)	Pu-241	Am-241	Gross beta(d)	Gross alpha(d)								
UCD1-18	A	A	A	*	*	*	*	A	A	A	A	A	S	S	A	A	*
UCD1-1	*	*	*	*	*	*	*	*	*	*	*	*	A	A	*	*	*
UCD1-4	Q	Q	*	Q	Q	*	*	Q	Q	Q	A	A	Q	Q	Q	Q	*
UCD1-10	A	A	*	*	*	*	*	A	A	Q	A	A	Q	Q	Q	A	*
UCD1-11	A	A	*	*	*	*	*	A	A	A	*	A	S	S	A	A	*
UCD1-12	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	A	Q	Q	Q	Q	*
UCD1-13	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	A	A	Q	Q	Q	*
UCD1-19	A	A	*	*	*	*	*	A	A	A	*	A	A	A	A	A	*
UCD1-20	S	S	S	S	S	*	*	S	S	A	A	A	A	S	A	A	*
UCD1-21	A	A	A	A	A	A	A	A	A	A	*	A	A	A	A	*	*
UCD1-22	S	S	*	S	S	S	S	S	S	*	*	*	*	*	S	*	*
UCD1-23	S	S	S	S	S	*	*	S	S	A	*	A	A	A	A	*	*
UCD1-24	A	A	A	A	A	*	*	A	A	A	*	A	A	A	A	A	*
UCD1-25	A	Q	Q	A	A	*	*	A	A	Q	A	A	Q	Q	A	A	*
UCD1-28(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD1-34	A	S	A	A	A	*	*	A	A	S	A	A	S	S	A	A	*
UCD1-27Z3	*	A	A	*	*	*	*	*	*	A	*	*	A	A	*	*	*

Table A-2
Current Groundwater Monitoring Parameters and Schedule
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Well	Analyte/Analysis															
	Radiological Analytes								VOCs(b)(d)	SVOCs(c)	Metals(d)	Nitrate(d)	Chromium (hexavalent)(d)	TOC, TDS	Pesticides & PCBs	Alkalinity Cations, Anions
	Gamma(d)	Tritium(d)	C-14(d)	Sr-90(d)	Ra-226(d)	Pu-241	Am-241	Gross beta(d)								
UCD2-17	A	A	A	*	*	*	*	A	A	A	A	S	S	A	A	*
UCD2-7	S	S	S	S	S	*	*	S	S	A	*	S	S	A	A	*
UCD2-14	Q	Q	Q	Q	Q	*	*	Q	Q	Q	A	Q	Q	Q	Q	*
UCD2-15	Q	Q	*	Q	Q	*	*	Q	Q	Q	A	Q	Q	Q	Q	*
UCD2-16	S	S	*	S	S	*	*	S	S	S	*	Q	Q	Q	*	*
UCD2-29(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-30(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-31(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-32	Q	Q	Q	Q	Q	*	*	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-35(e)	A	Q	Q	A	A	*	*	A	A	S	A	Q	Q	Q	A	*
UCD2-36(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-37(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-38(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-39(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-40(e)	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD2-26	A	Q	Q	A	A	*	*	A	A	Q	A	Q	Q	Q	A	*
UCD2-27Z5	*	A	A	*	*	*	*	*	*	A	*	A	A	*	*	*
UCD4-41	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD4-42	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
UCD4-43	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q

A = annual sampling (February); S = semi-annual sampling (February and August); Q = quarterly sampling (Feb., May, Aug., and Nov.); * = sample not analyzed for constituent

(a) At each sampling event, samples are analyzed for pH, Eh, electrical conductivity, temperature, and turbidity in the field; water levels are measured before each sampling event.

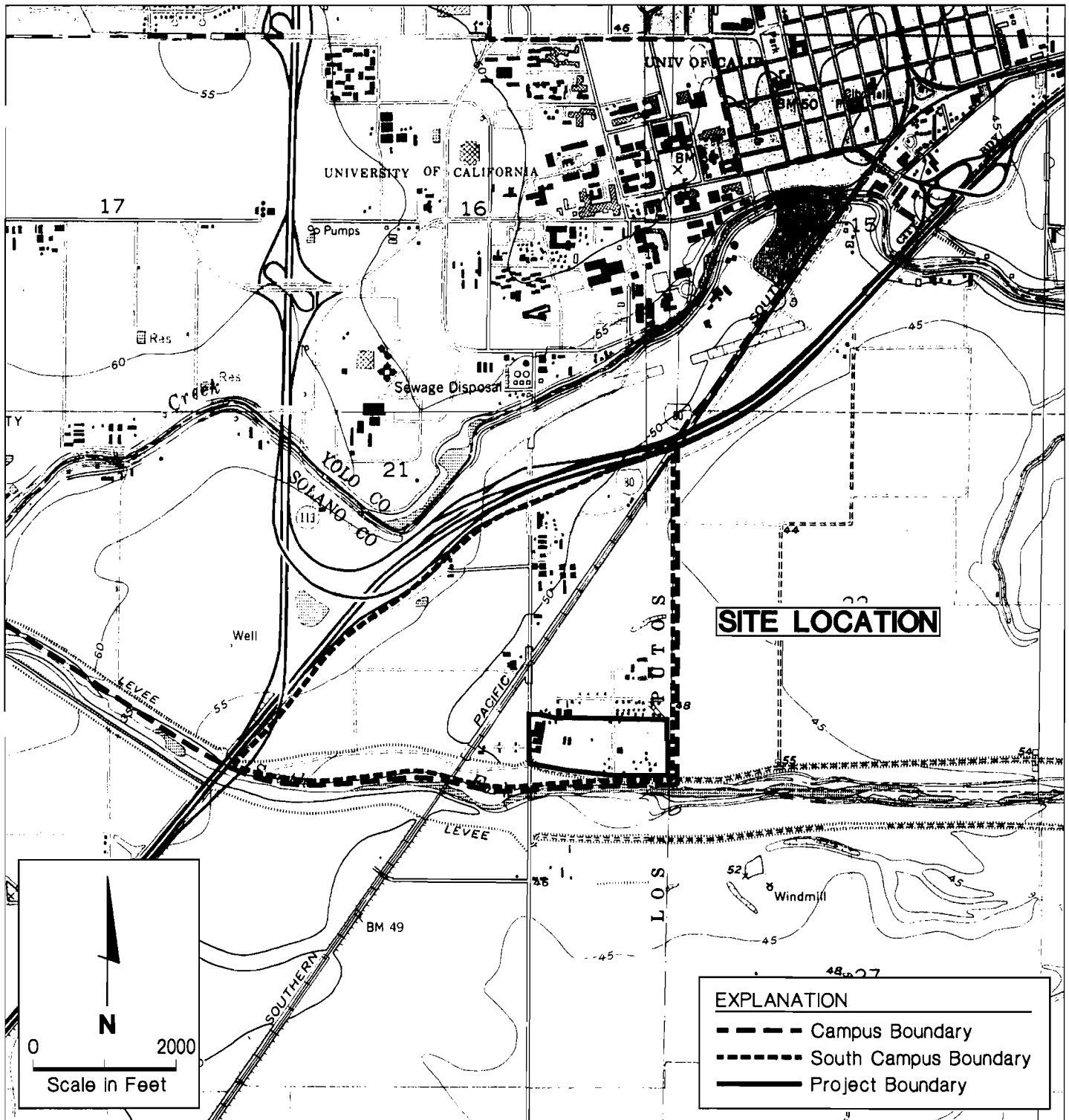
(b) Volatile organic compounds.

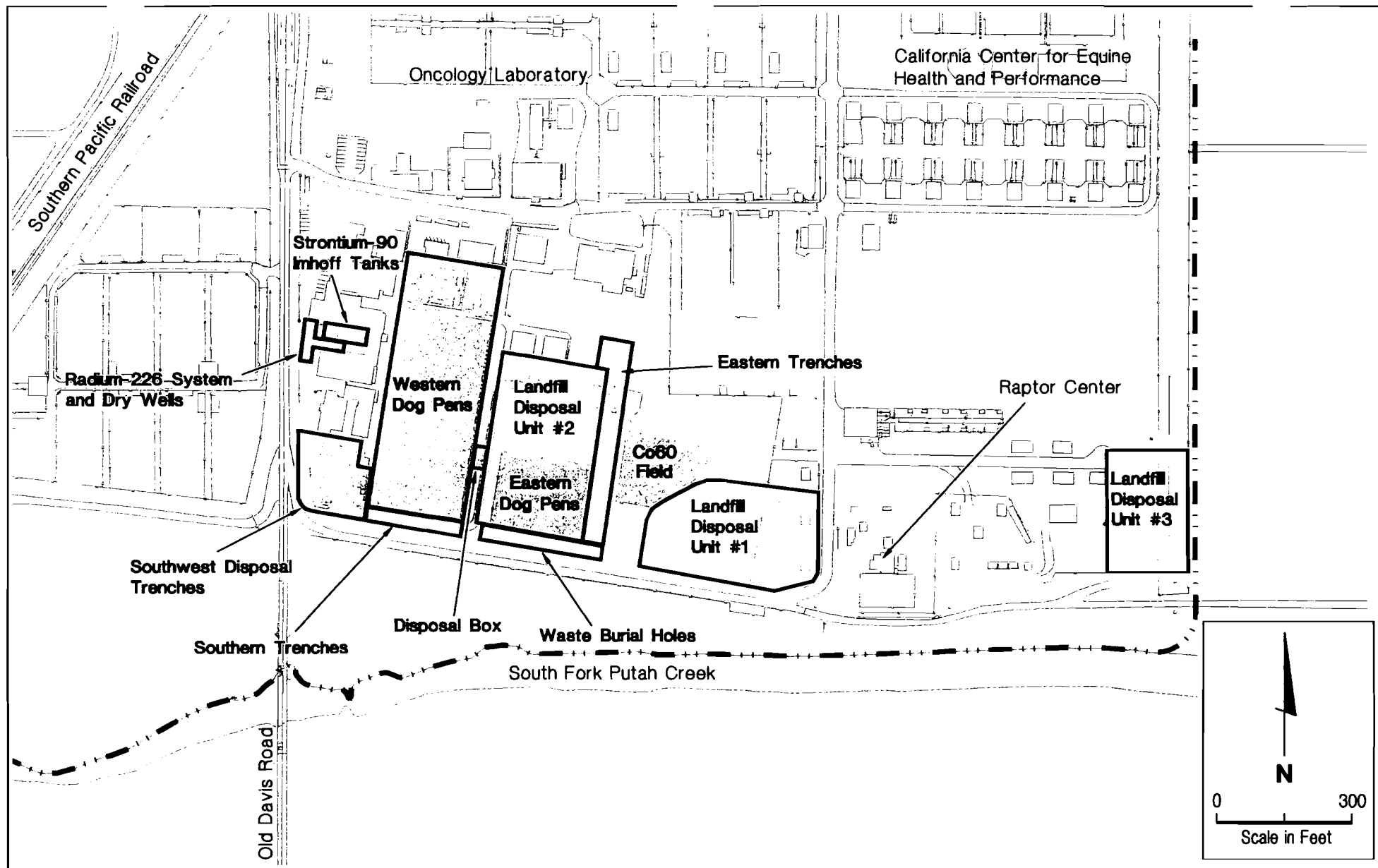
(c) Semivolatile organic compounds.

(d) As applicable, equipment blanks are collected at a minimum frequency of ten percent for the same parameters as the associated samples.

(e) Well is also sampled monthly as part of the IRA monitoring.

APPENDIX A
FIGURES





EXPLANATION

- Campus Boundary
- DOE Responsibility (within LEHR Site)
- ... UC Davis Responsibility Areas (SCDS)



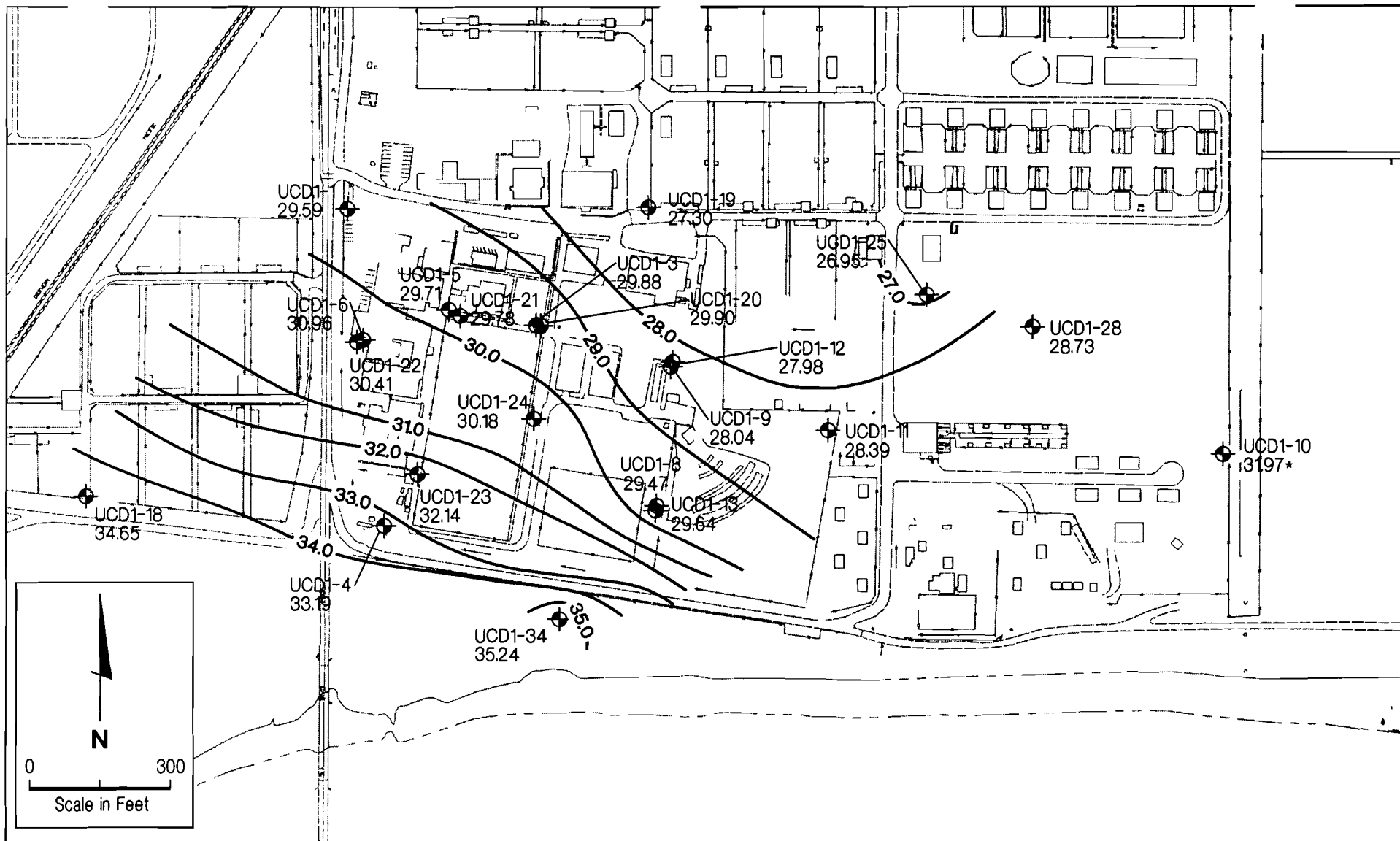
DAMES & MOORE

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00234000-990403 MAJ 990403N 4/13/99

WASTE DISPOSAL UNITS
LEHR/SCDS Environmental Restoration
Davis, California

FIGURE A-2



EXPLANATION

- ⊕ UCD1-11 HSU-1 Monitoring Well
- * Appears to be anomalous, not used in contouring.
- 30.0 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-1 WINTER QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

FIGURE A-4

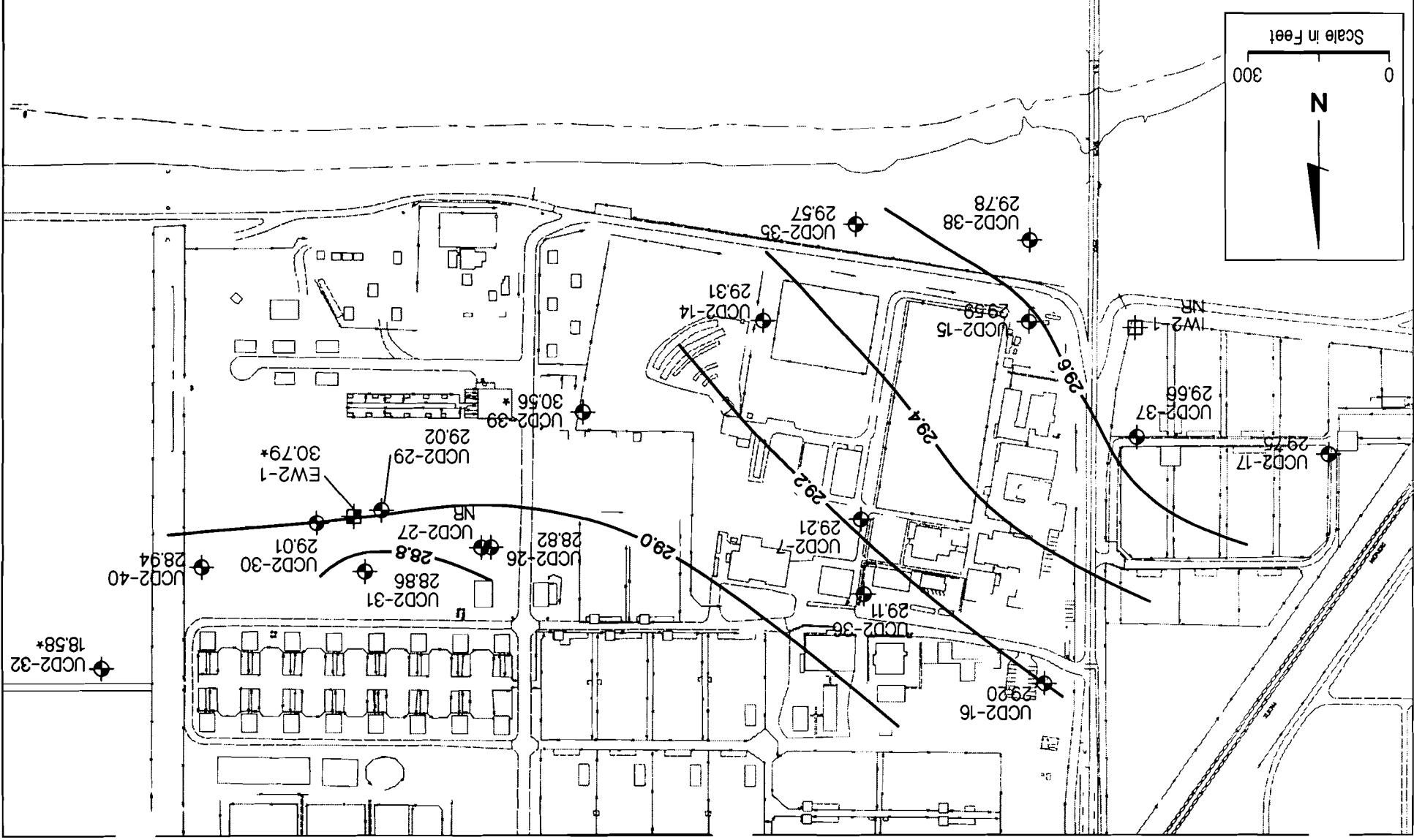
GROUNDWATER ELEVATION CONTOUR MAP - HSU-2 WINTER QUARTER, 1998

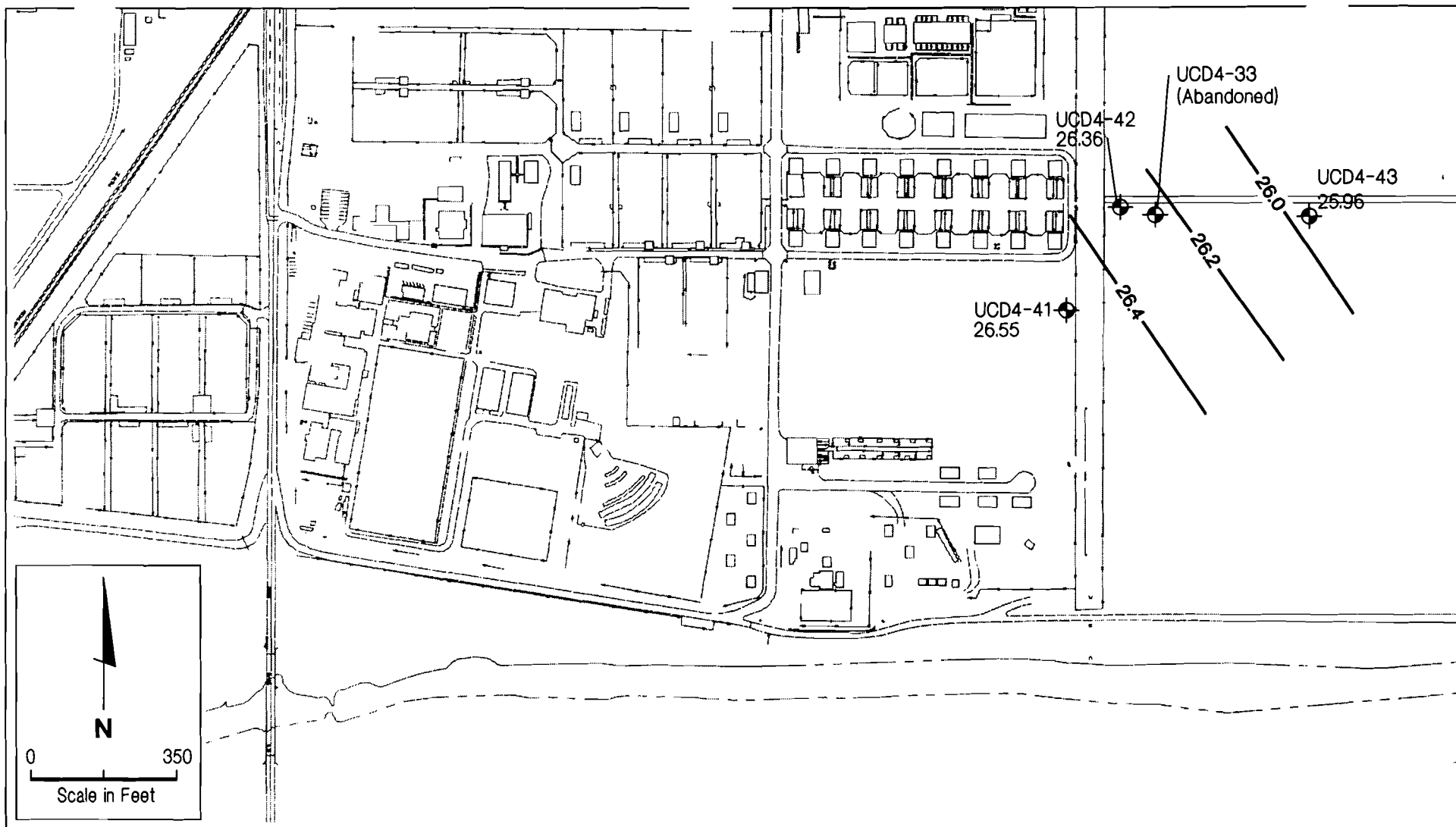
* Appears to be anomalous,
not used in contouring.

- UCD2-17 HSU-2 Monitoring Well
- EW2-1 HSU-2 Extraction Well
- IW2-1 HSU-2 Injection Well

Groundwater Elevation
Contour (Feet MSL)

EXPLANATION





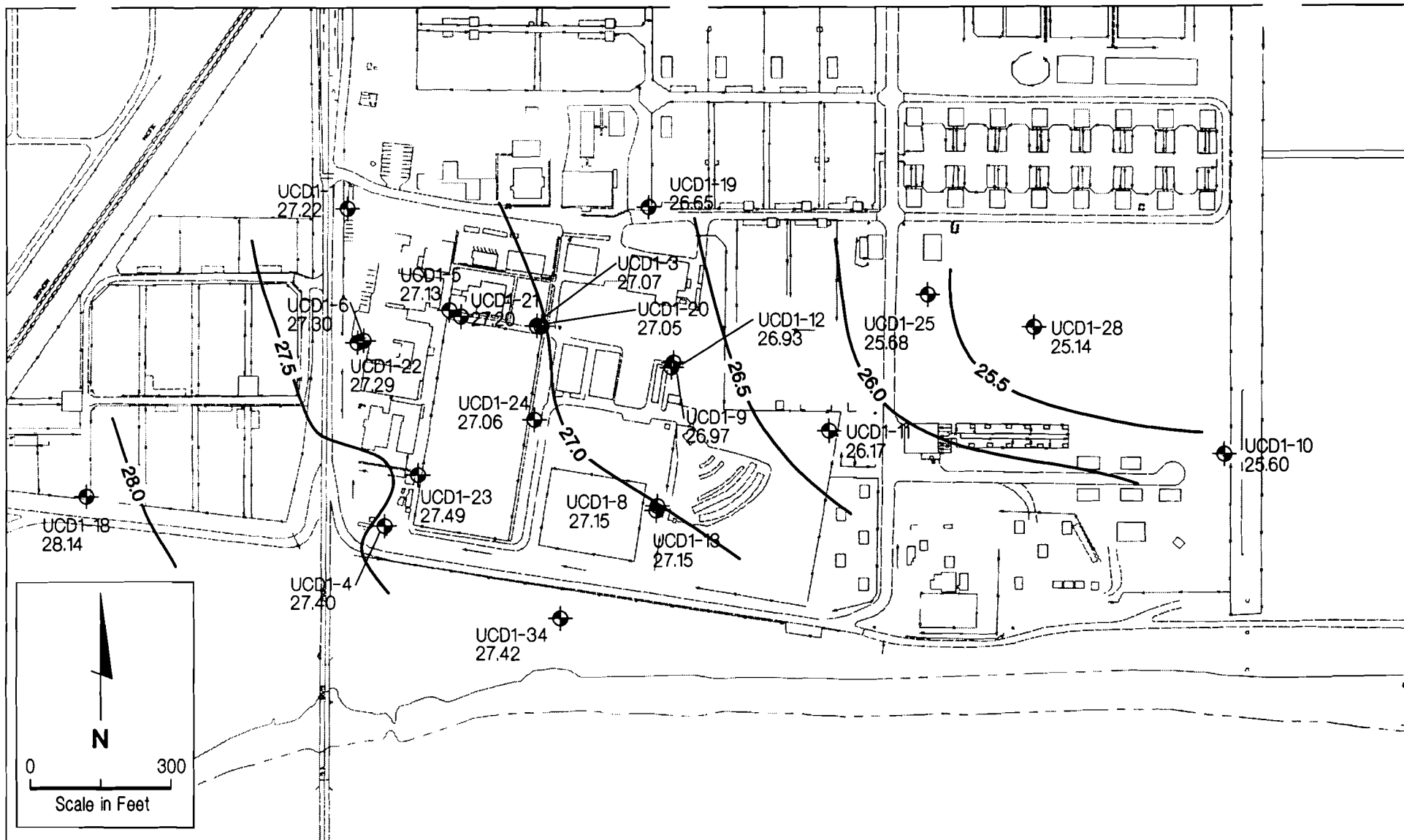
EXPLANATION

⊕ UCD4-33 HSU-4 Monitoring Well

— 11.4 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-4 WINTER QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California



EXPLANATION

- ◆ UCD1-11 HSU-1 Monitoring Well
- * Appears to be anomalous, not used in contouring.
- 30.0 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-1 SPRING QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California



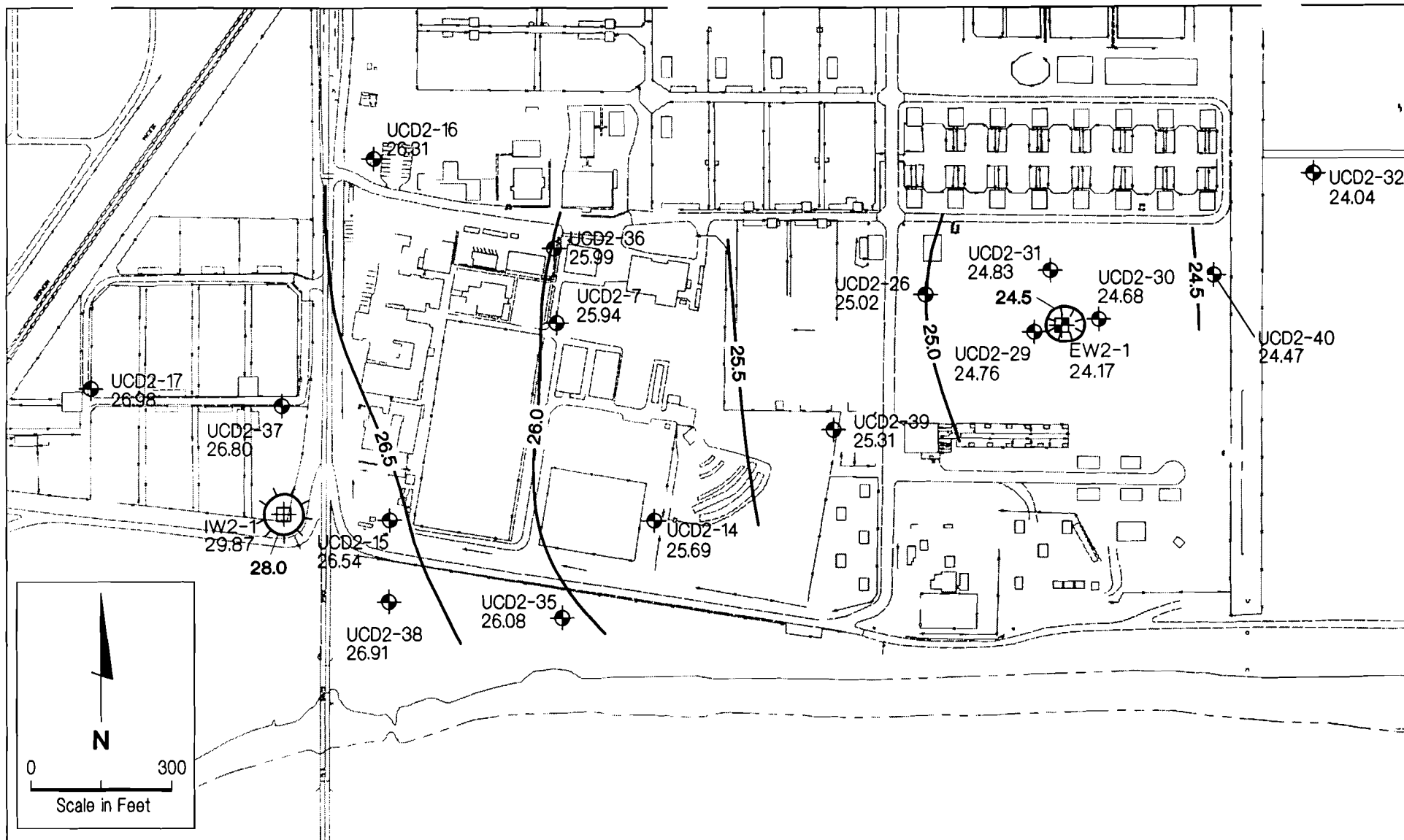
DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

00234000-990403

maj 990403C 4/13/99

FIGURE A-7

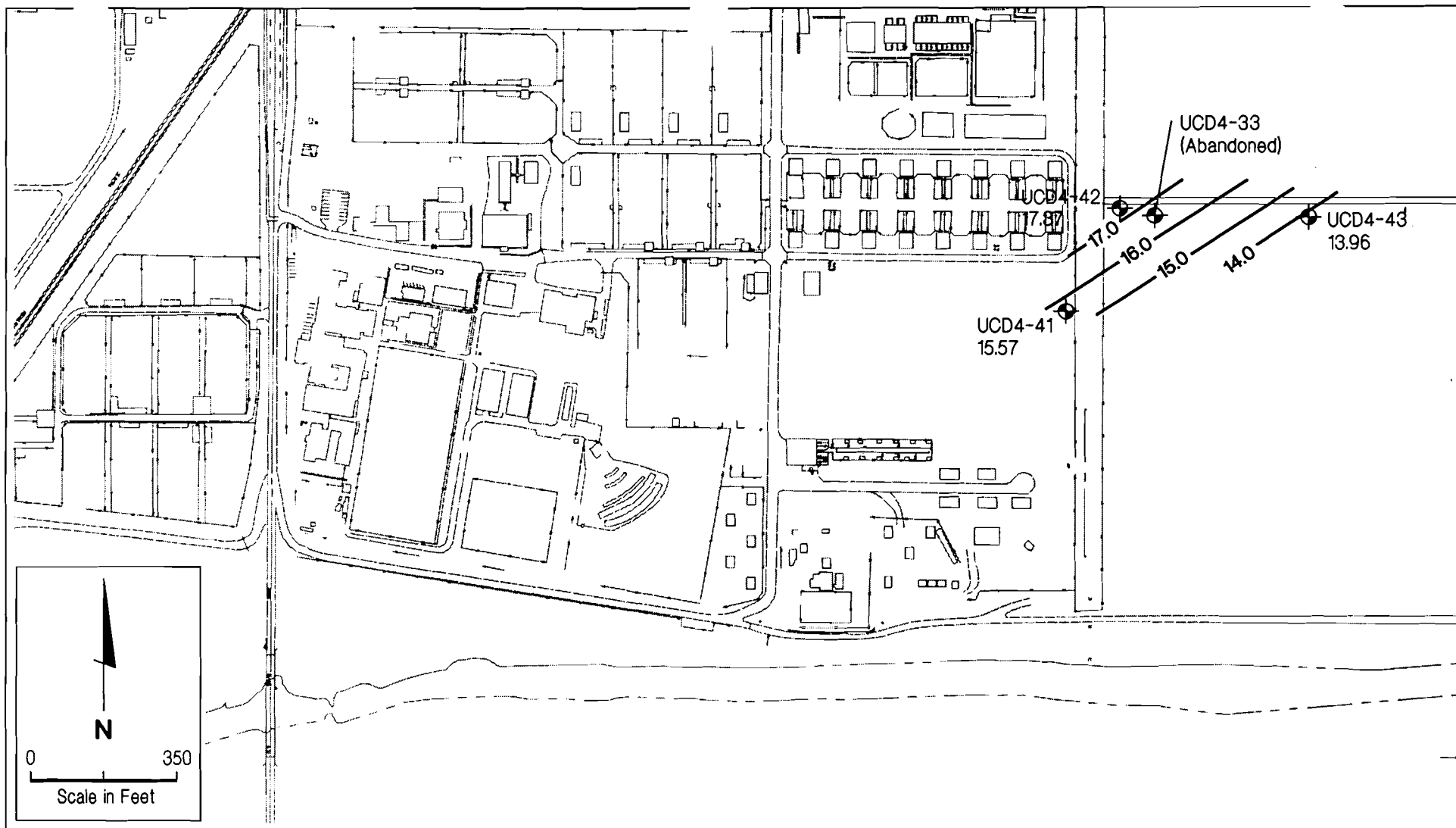


EXPLANATION

- ◆ UCD2-17 HSU-2 Monitoring Well
- ⊞ EW2-1 HSU-2 Extraction Well
- ⊞ IW2-1 HSU-2 Injection Well
- 26.0 — Groundwater Elevation Contour (Feet MSLD)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-2 SPRING QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California



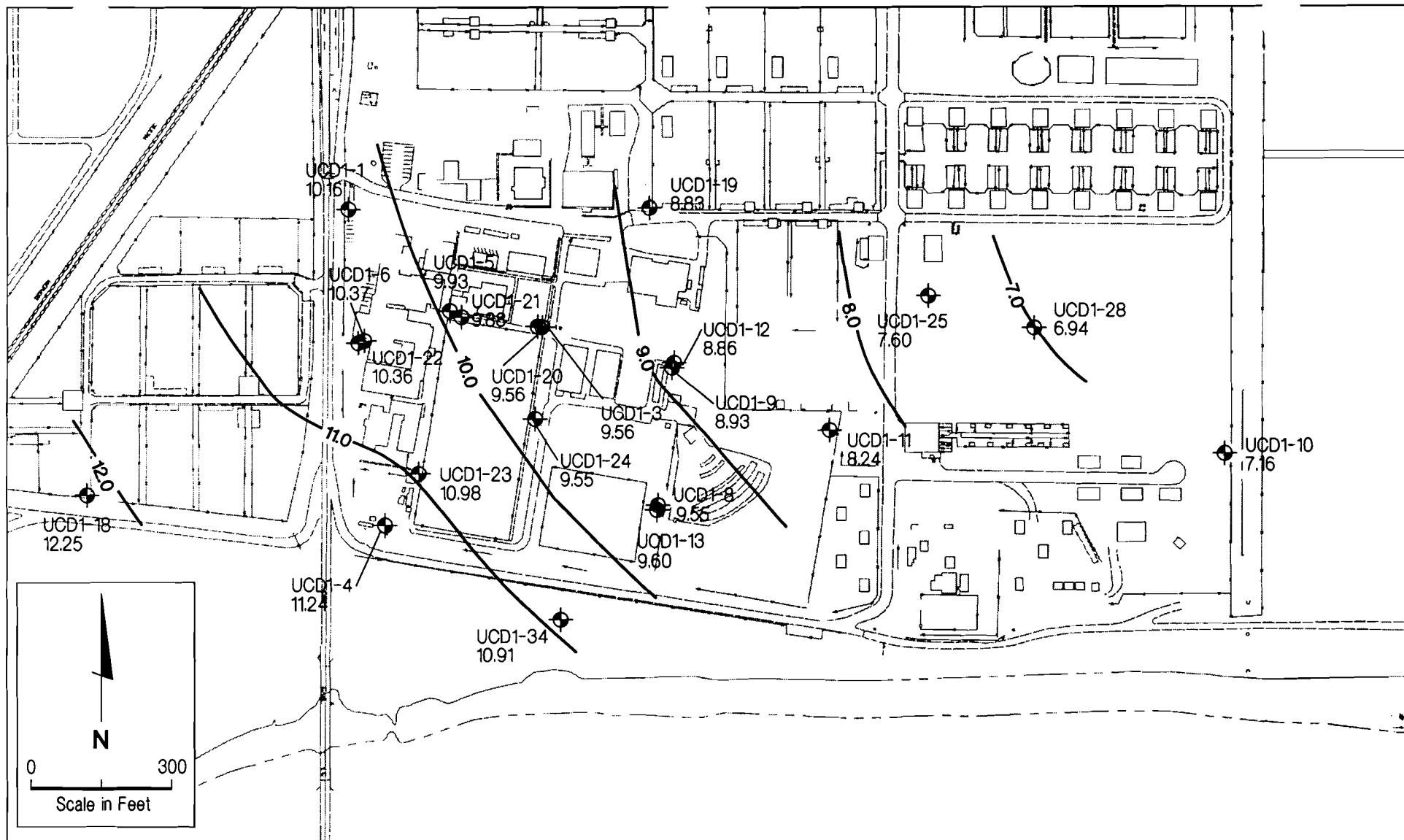
EXPLANATION

⊕ UCD4-33 HSU-4 Monitoring Well

— 11.4 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-4 SPRING QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

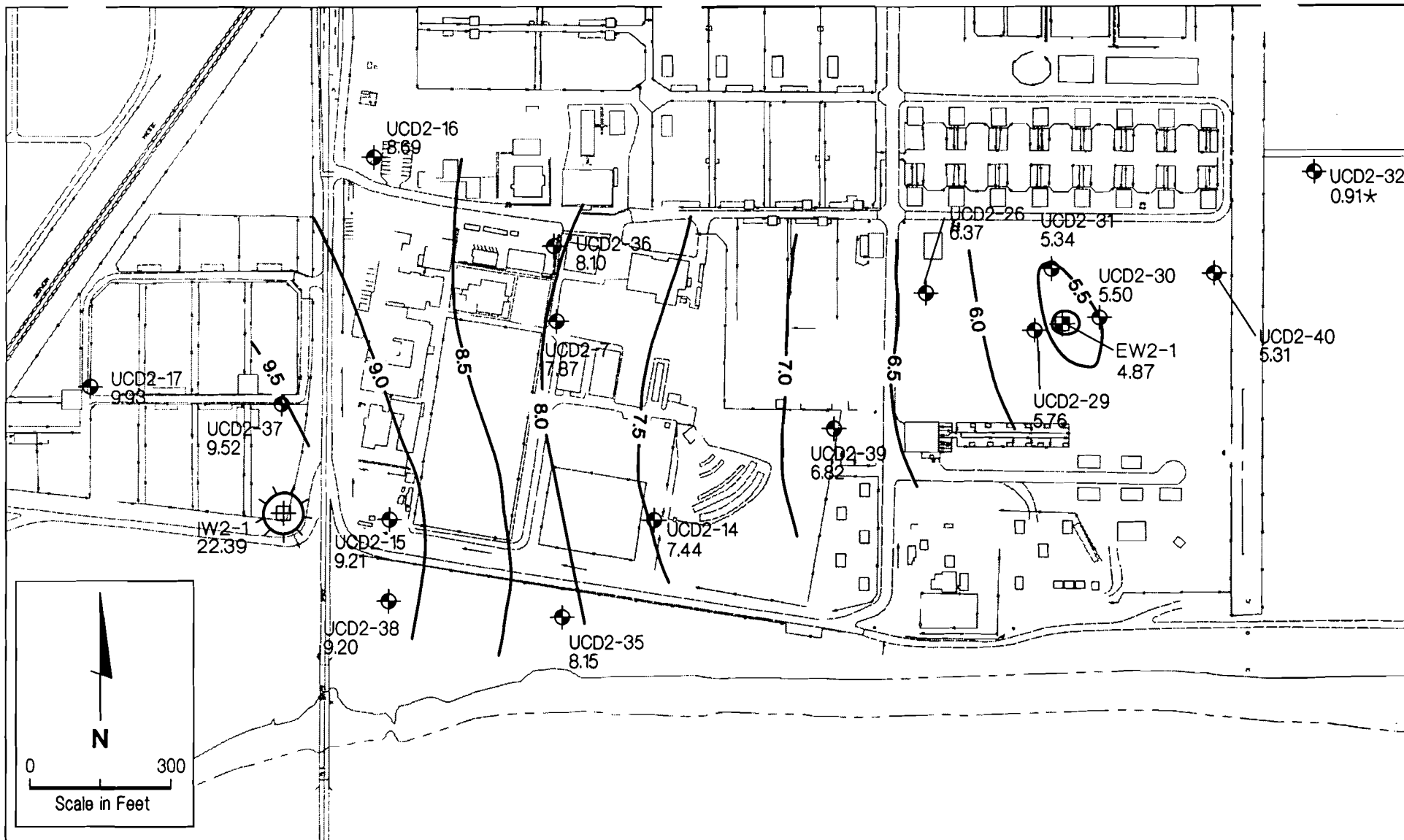


EXPLANATION

- ⊕ UCD1-11 HSU-1 Monitoring Well
- * Appears to be anomalous, not used in contouring.
- 10.0 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-1 SUMMER QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

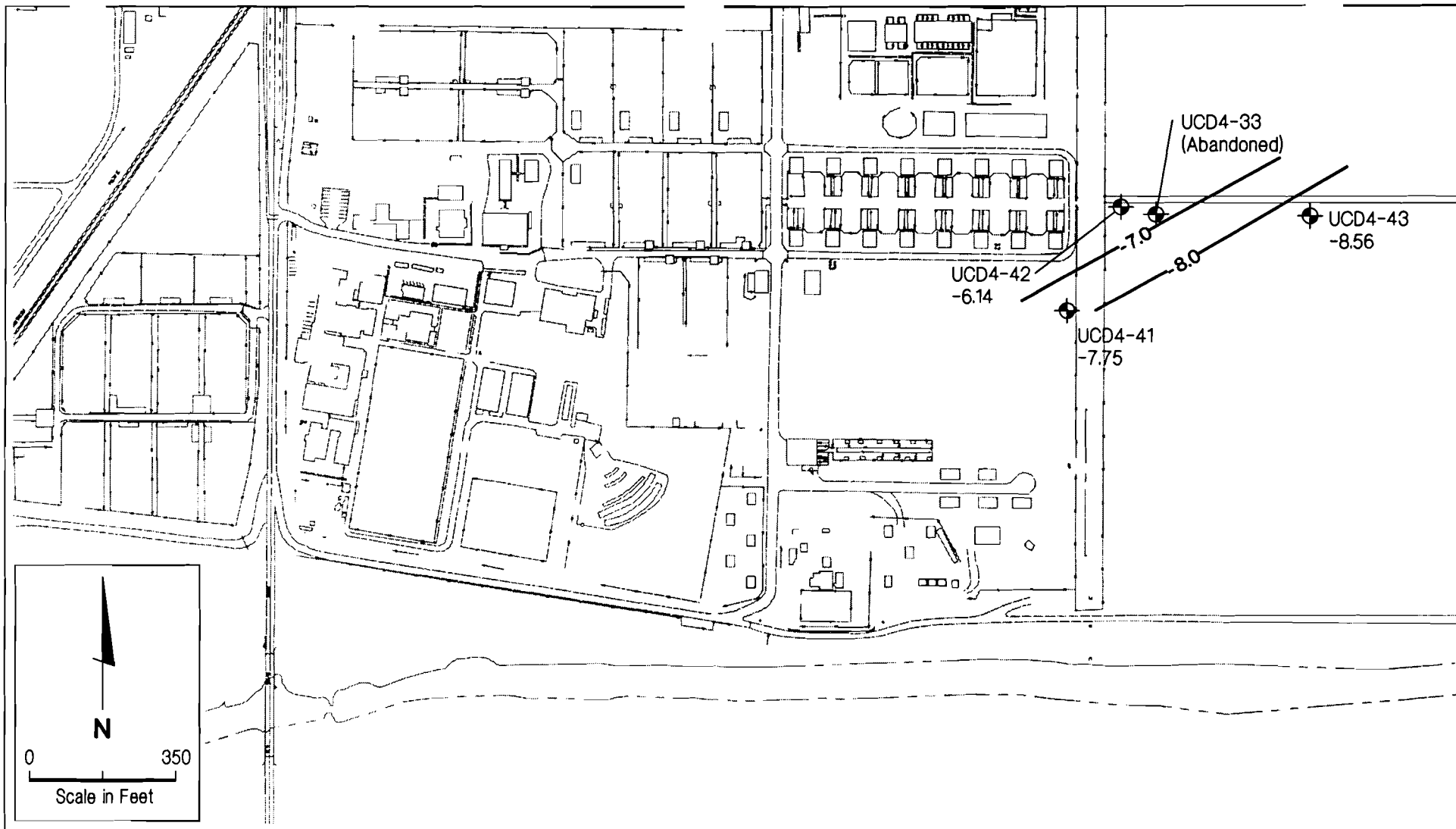


EXPLANATION

- ⊕ UCD2-17 HSU-2 Monitoring Well
- ⊞ EW2-1 HSU-2 Extraction Well
- ⊞ IW2-1 HSU-2 Injection Well
- 26.0 — Groundwater Elevation Contour (Feet MSLD)
- * Appears to be Anomalous, not Used in Contouring

GROUNDWATER ELEVATION CONTOUR MAP - HSU-2 SUMMER QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California



EXPLANATION

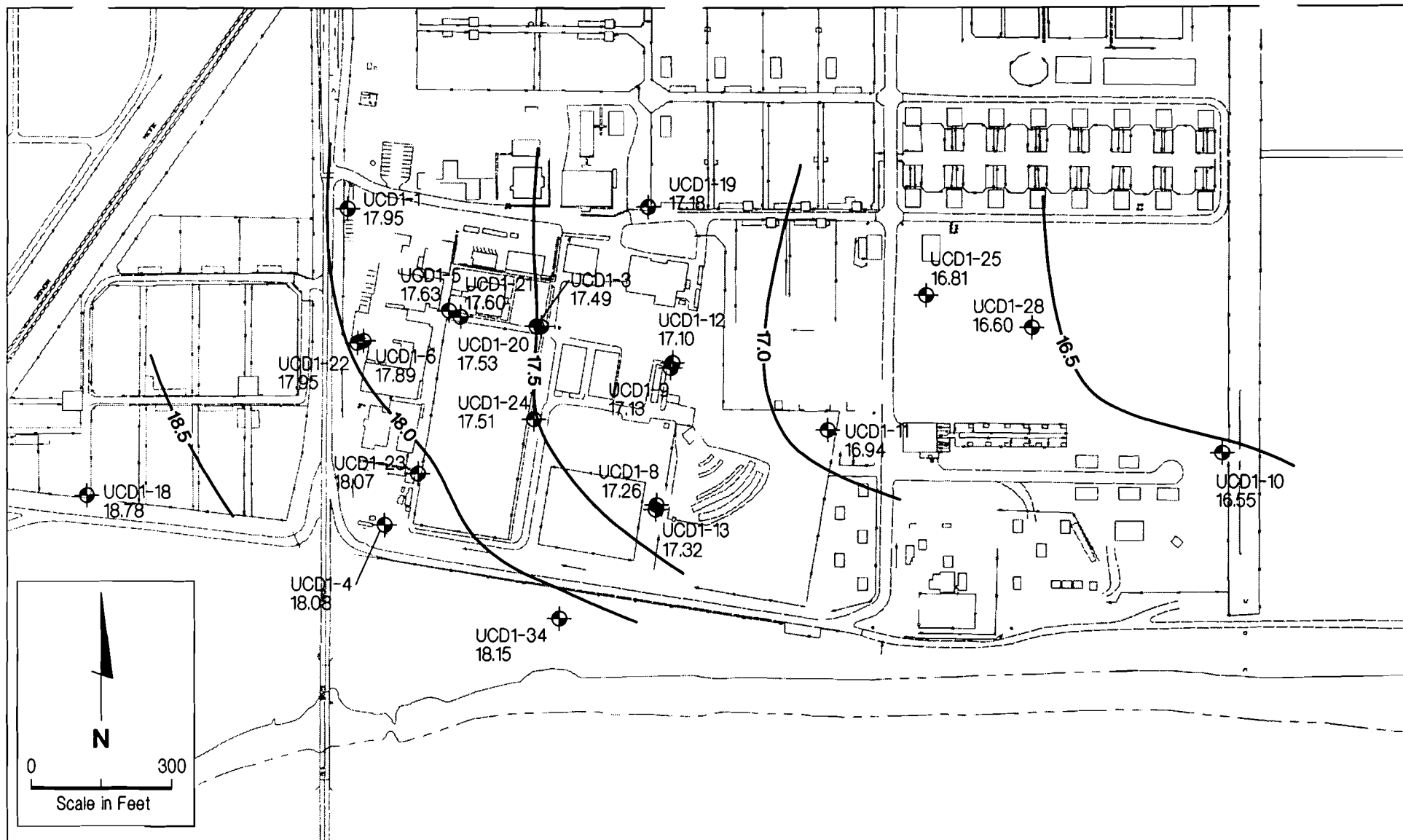
◆ UCD4-33 HSU-4 Monitoring Well

— 11.4 — Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-4 SUMMER QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

FIGURE A-12

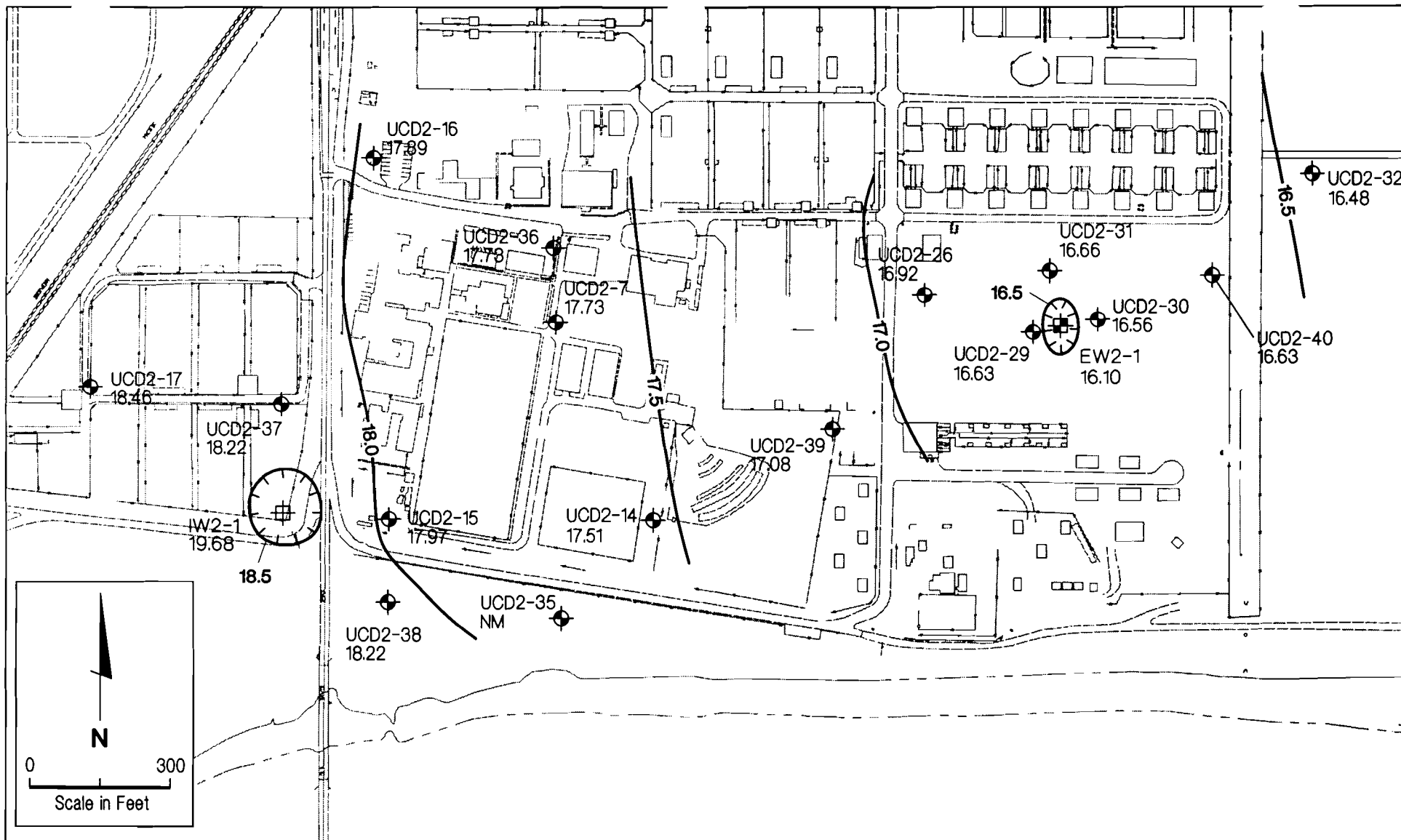


EXPLANATION

- UCD1-11 HSU-1 Monitoring Well
- 18.0 Groundwater Elevation Contour (Feet MSL)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-1 FALL QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

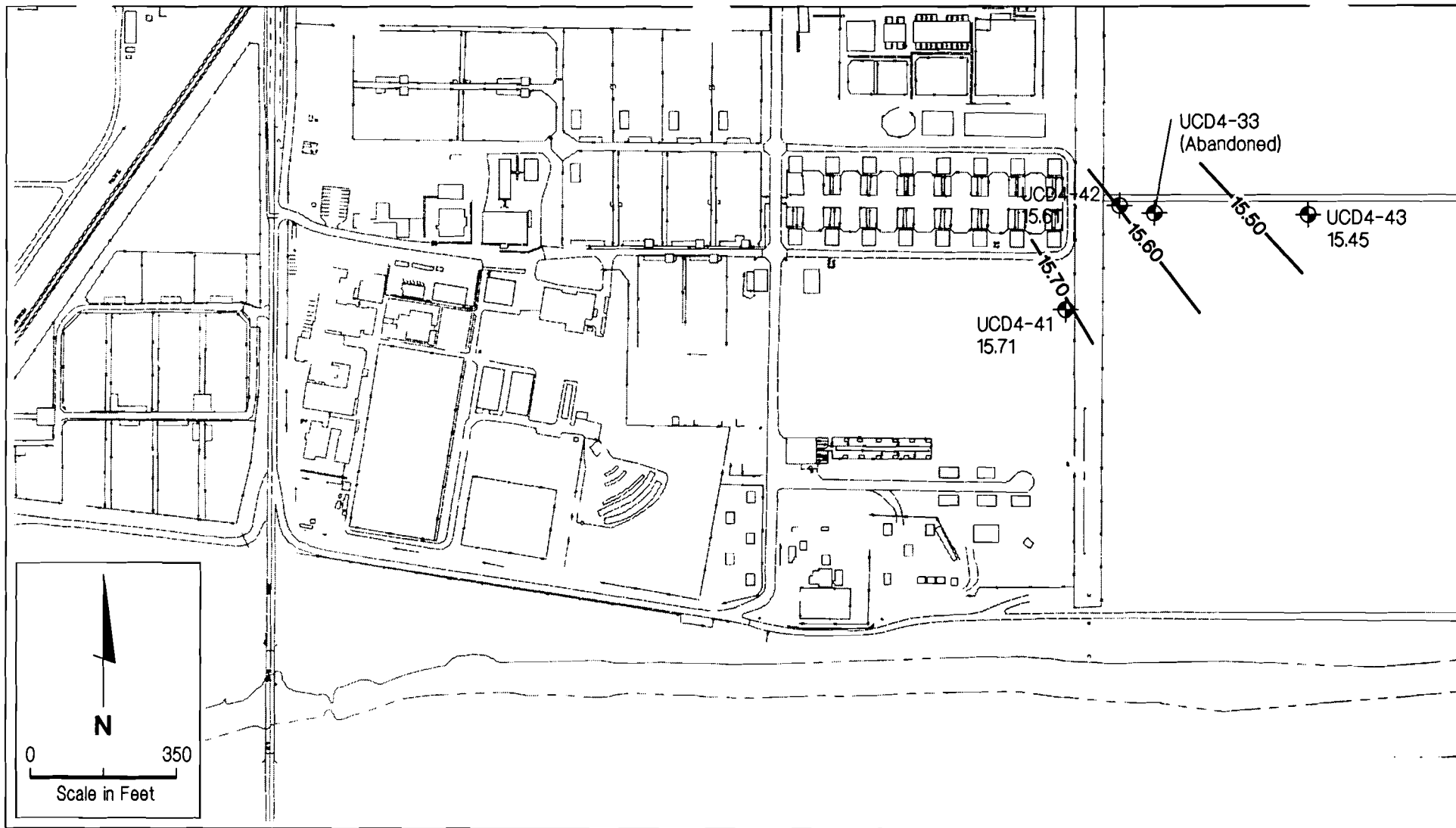


EXPLANATION

- ◆ UCD2-17 HSU-2 Monitoring Well
- ⊕ EW2-1 HSU-2 Extraction Well
- ⊞ IW2-1 HSU-2 Injection Well
- NM Not Measured
- 18.0 — Groundwater Elevation Contour (Feet MSLD)

GROUNDWATER ELEVATION CONTOUR MAP - HSU-2 FALL QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California



EXPLANATION

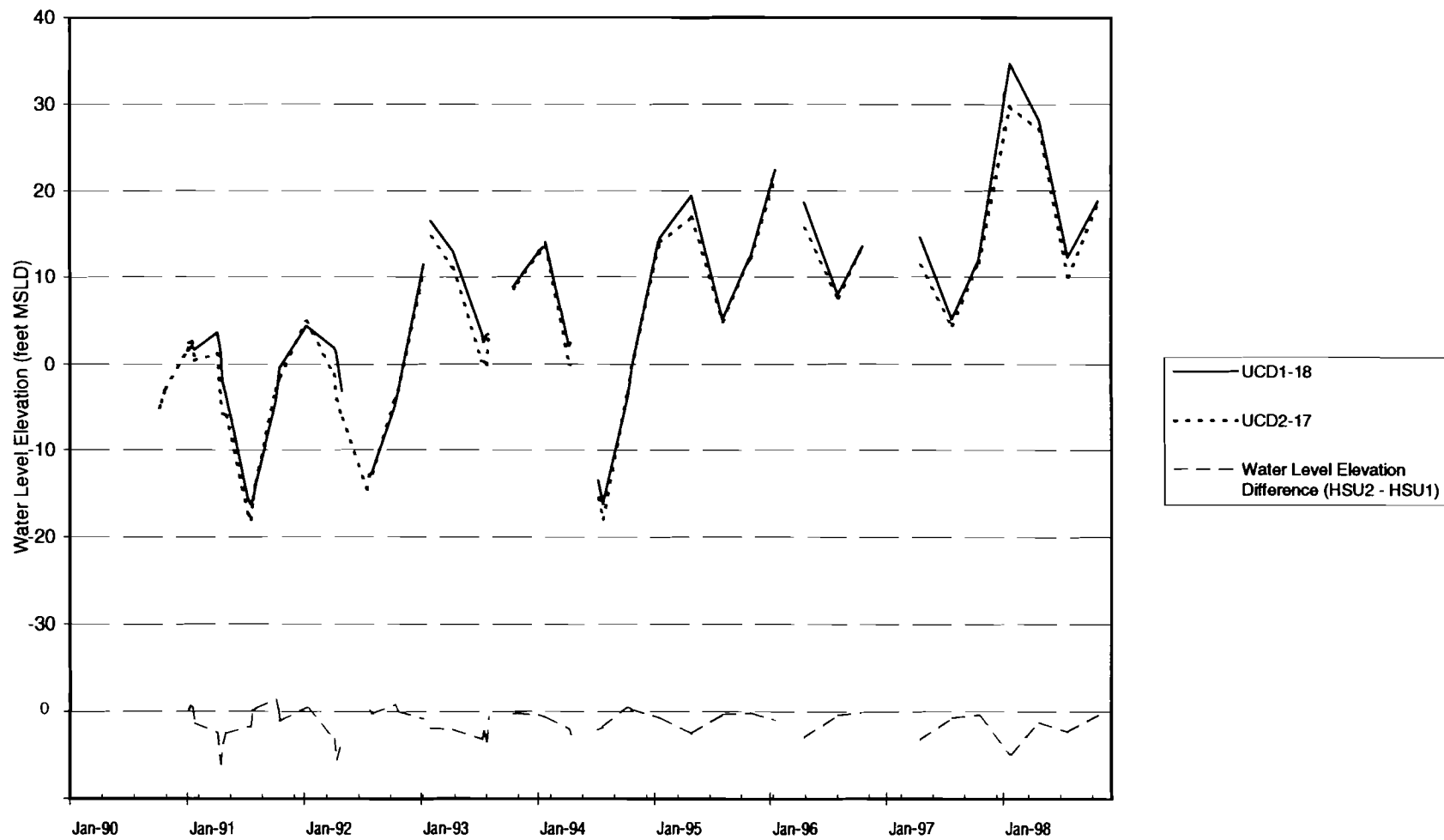
⊕ UCD4-33 HSU-4 Monitoring Well

— 15.60 — Groundwater Elevation Contour (Feet MSL)

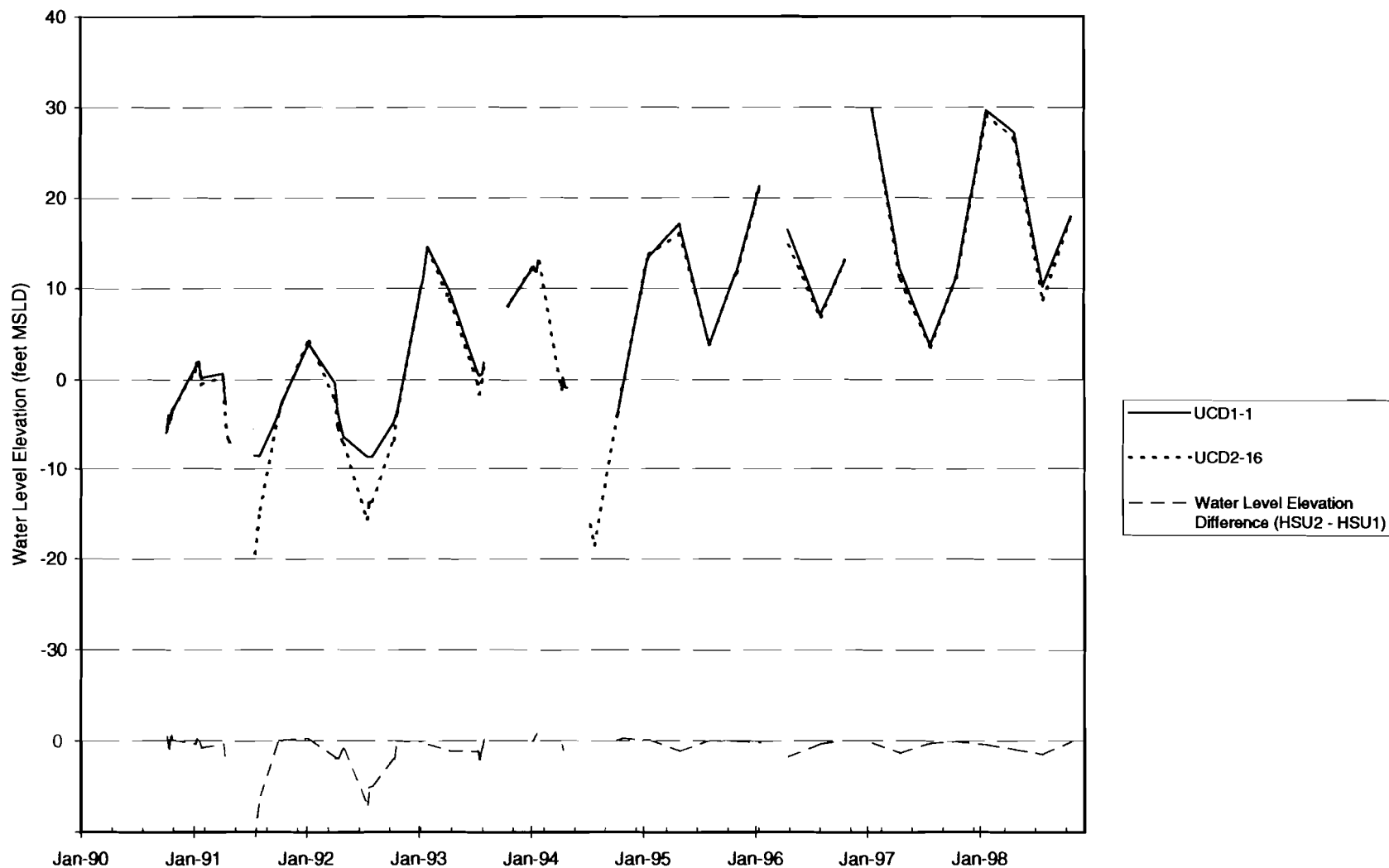
GROUNDWATER ELEVATION CONTOUR MAP HSU-4 FALL QUARTER, 1998

LEHR/SCDS Environmental Restoration
Davis, California

FIGURE A-15

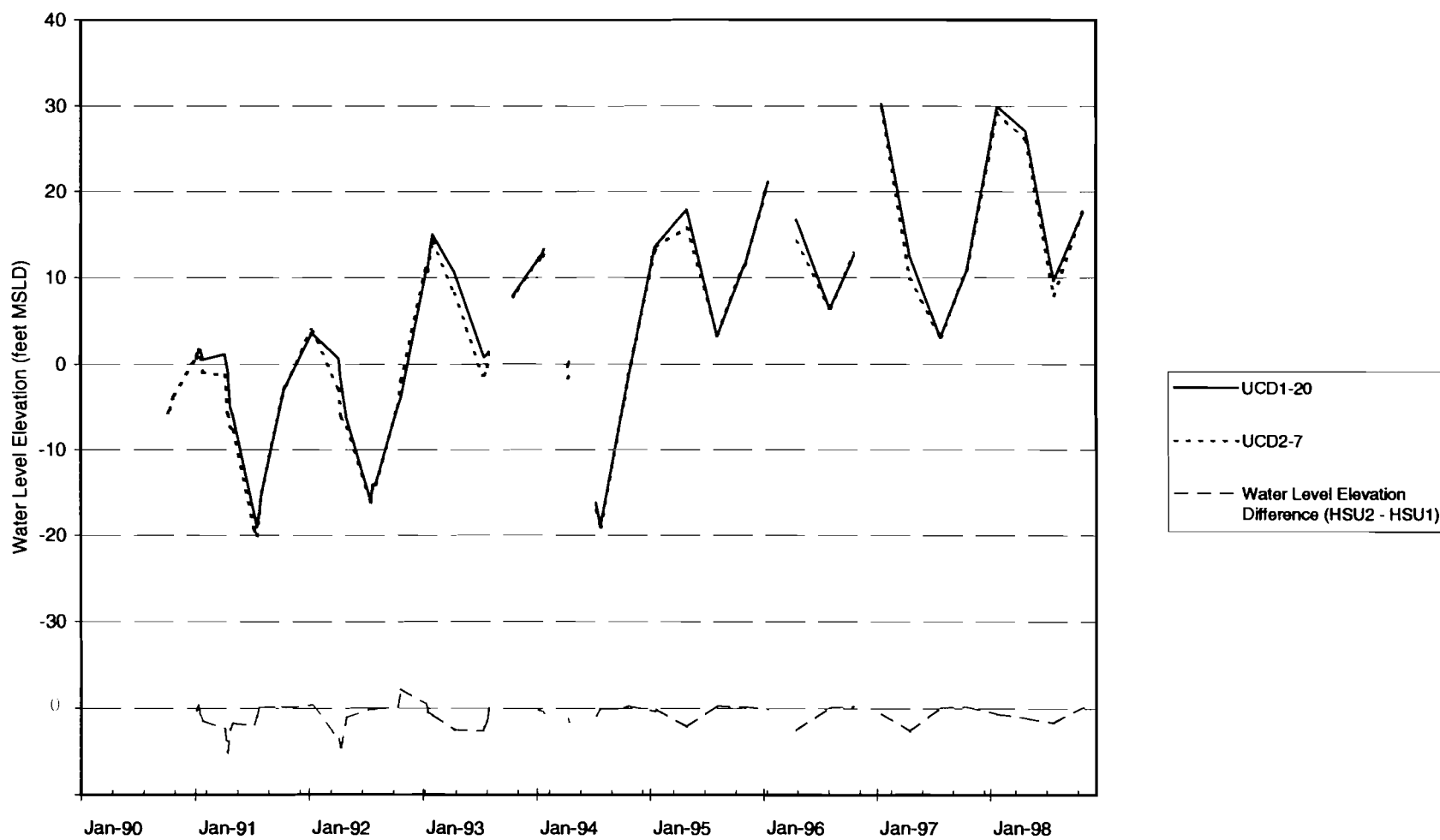


GROUNDWATER ELEVATION HYDROGRAPH
UCD1-18 and UCD2-17
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

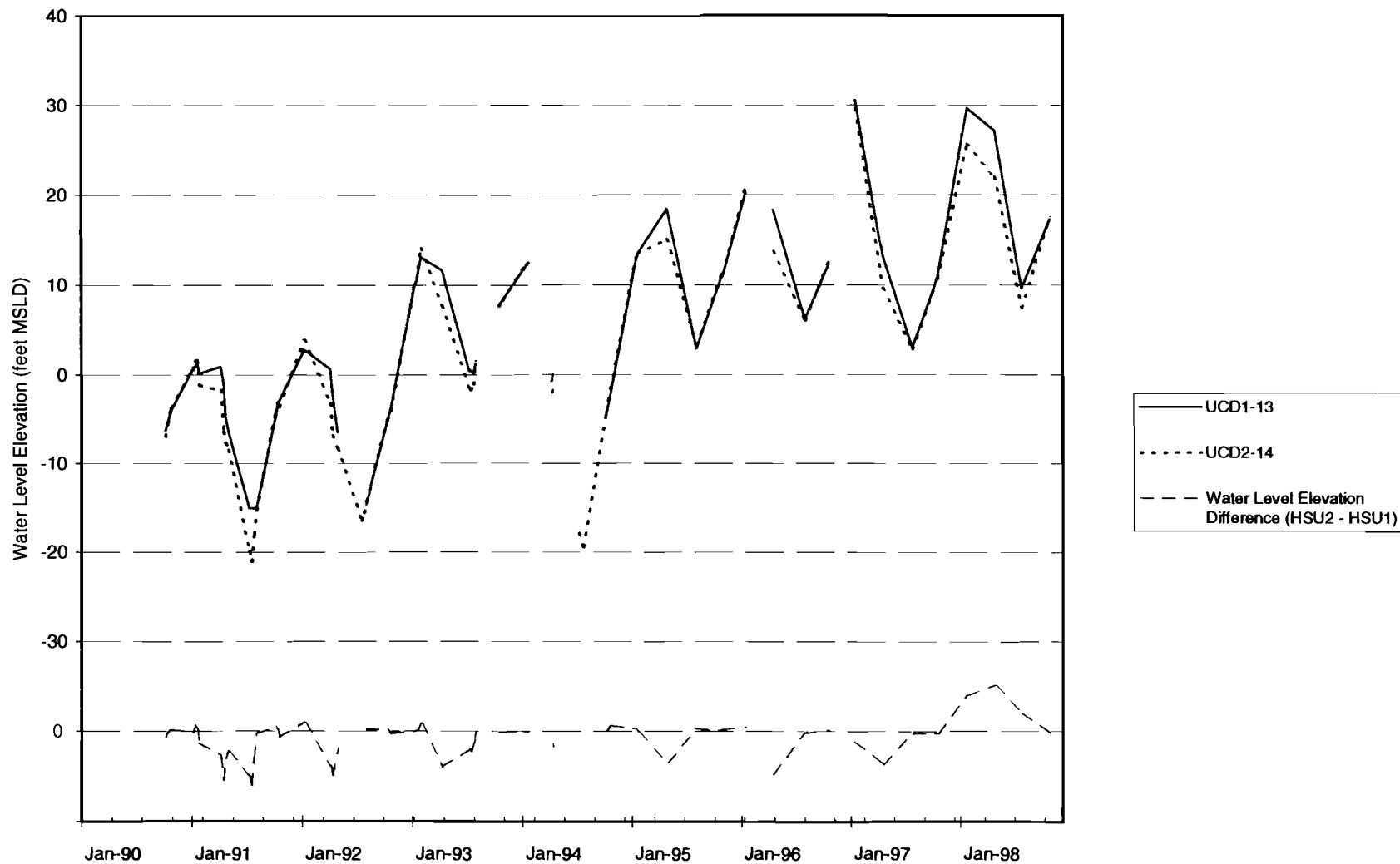


GROUNDWATER ELEVATION HYDROGRAPH
UCD1-1 and UCD2-16
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

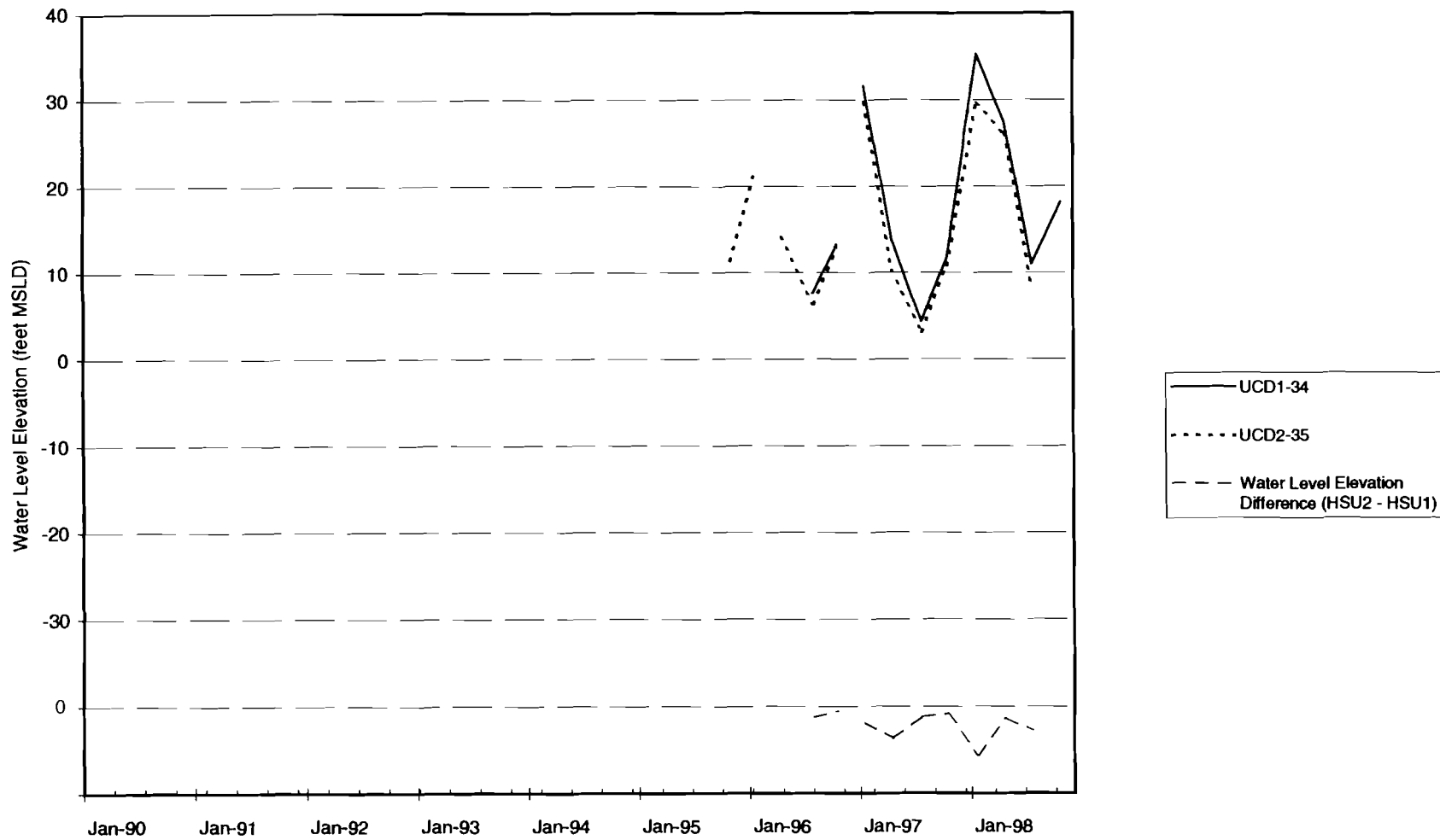
Figure A-17



GROUNDWATER ELEVATION HYDROGRAPH
UCD1-20 and UCD2-7
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

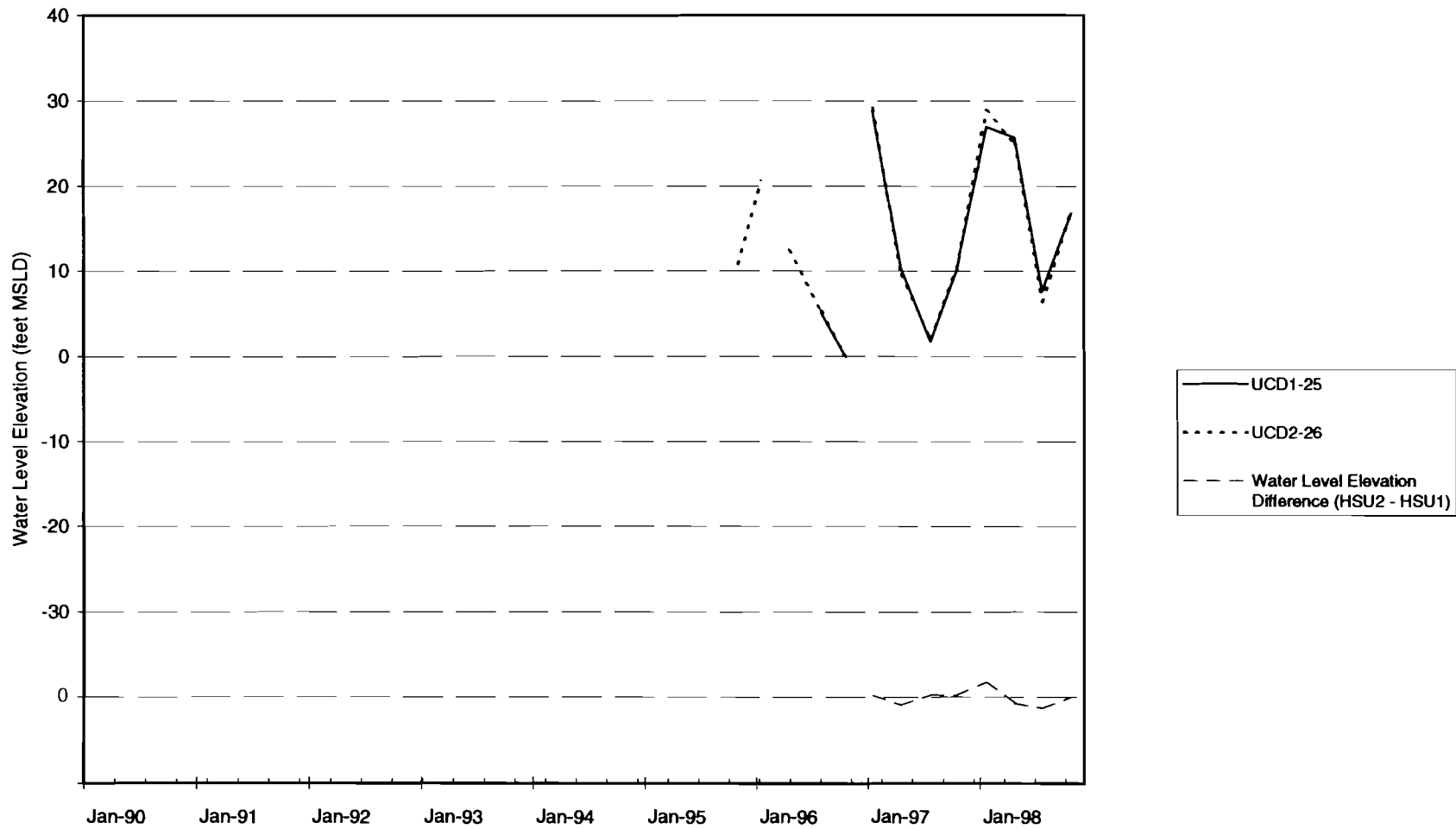


GROUNDWATER ELEVATION HYDROGRAPH
UCD1-13 and UCD2-14
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California



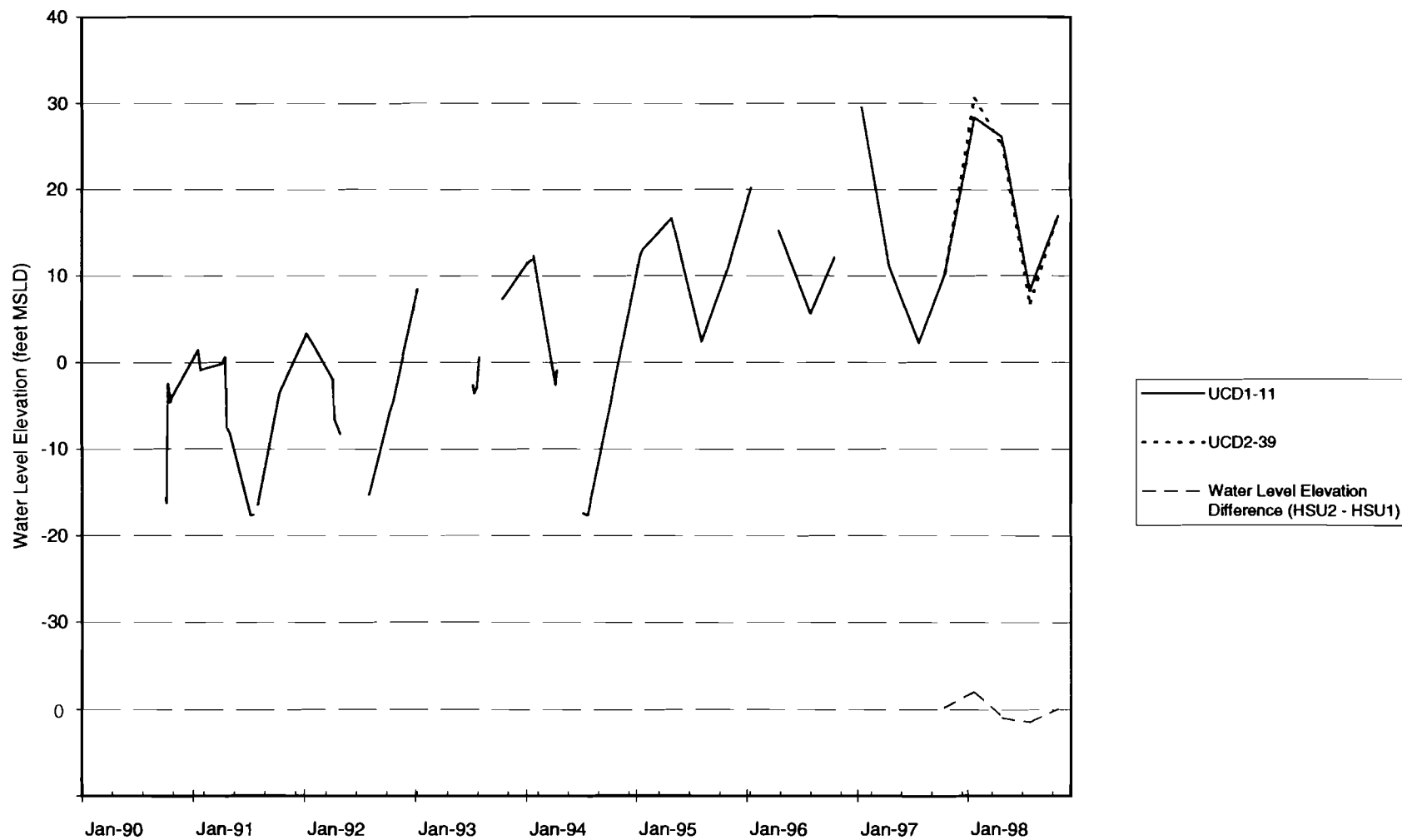
GROUNDWATER ELEVATION HYDROGRAPH
UCD1-34 and UCD2-35
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Figure A-20



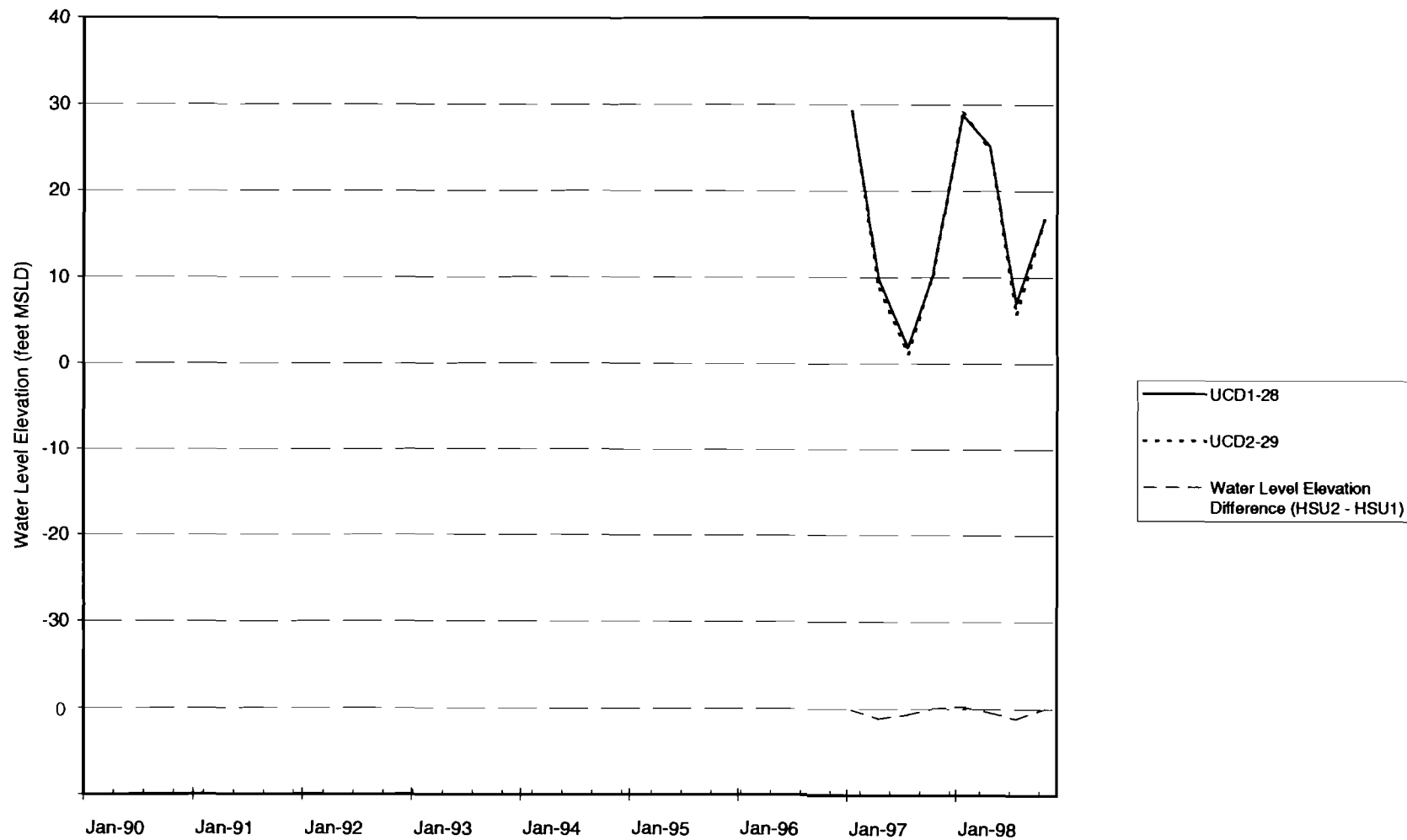
GROUNDWATER ELEVATION HYDROGRAPH
UCD1-18 and UCD2-17
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Figure A-21

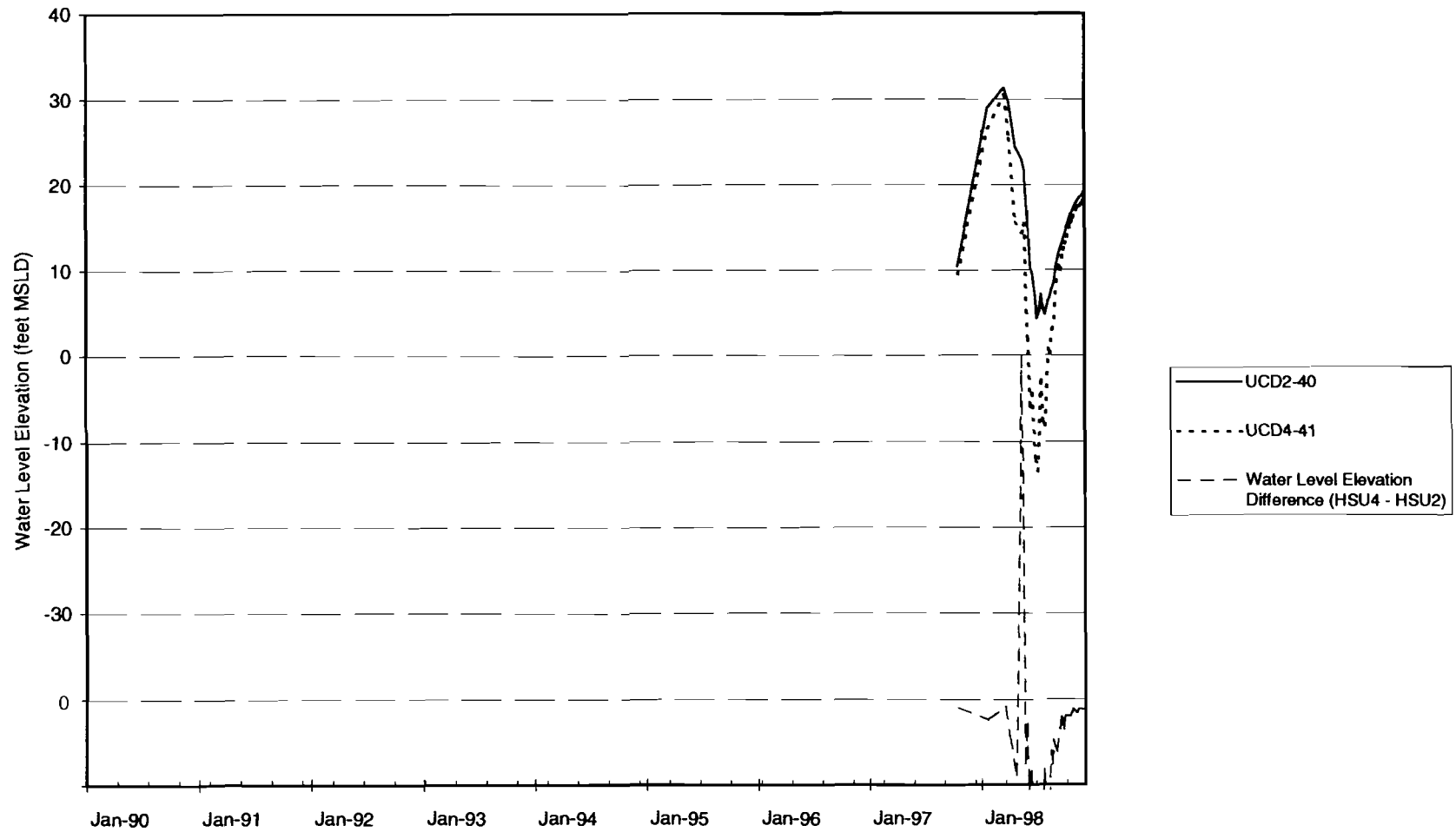


GROUNDWATER ELEVATION HYDROGRAPH
UCD1-11 and UCD2-39
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

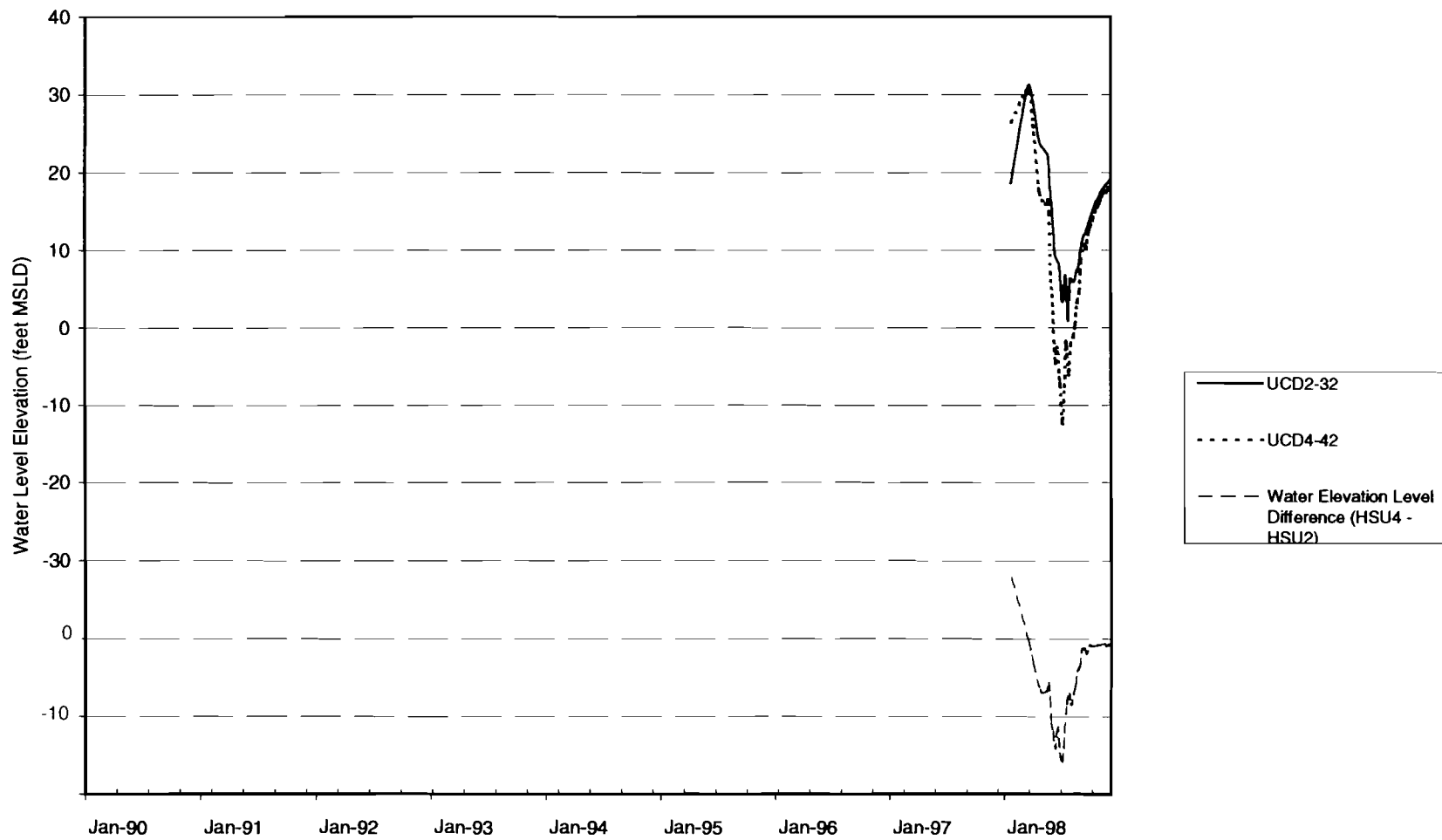
Figure A-22



GROUNDWATER ELEVATION HYDROGRAPH
UCD1-28 and UCD2-29
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California



GROUNDWATER ELEVATION HYDROGRAPH
UCD2-40 and UCD4-41
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California



GROUNDWATER ELEVATION HYDROGRAPH
UCD2-32 and UCD4-42
1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Figure A-25

APPENDIX B
ANALYTICAL RESULTS FOR GROUNDWATER,
SURFACE WATER AND STORM WATER

Appendix B

Data Validation Qualifier Definitions and Interpretation Key⁽¹⁾ Assigned by Dames & Moore's Data Review Team

DAMES & MOORE DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DAMES & MOORE DATA QUALIFIER DEFINITIONS – REASON CODE DEFINITIONS

- a Analytical sequence deficiency or omission.
- b Gross compound breakdown (4,4'-DDT/Endrin).
- c Calibration failure; poor or unstable response.
- d Laboratory duplicate imprecision.
- e Laboratory duplicate control sample imprecision.
- f Field duplicate imprecision.
- g Poor chromatography.
- h Holding time violation.
- i Internal standard failure.
- j Poor mass spectrophotographic performance.
- k Serial dilution imprecision
- l Laboratory control sample recovery failure.
- m Matrix spike/matrix spike duplicate recovery failure.
- n Interference check sample recovery failure.
- o Calibration blank contamination (metals/inorganics only).
- p Preparation blank contamination (metals/inorganics only).
- q Quantitation exceeds linear range.
- r Linearity failure in initial calibration.
- s Surrogate spike recovery failure.
- t Instrument tuning failure.
- u No valid confirmation present (GC organics only).
- v Value is estimated below the MDA (Rads only).
- w Retention time (RT) outside of RT window.
- x Field blank contamination.
- y Trip blank contamination.
- z Method blank contamination.
- Q Other.

Interpretation Key

The following example shows how an analytical result which includes qualifiers assigned by both Dames & Moore data review team and the analytical laboratory could be displayed in the data tables:

<5JB|Uz

The qualifier assigned by the laboratory precedes the "|"; the qualifier assigned by the Dames & Moore data review team follows it. In this example, the result is qualified as non-detected due to the bias introduced by contamination of the associated method blank. Presence of the analyte in the method blank is indicated by the laboratory qualifier (B). The qualifier assigned by the Dames & Moore data review team (Uz) indicates that the analyte concentration is considered to be below the adjusted detection limit (quantitation limit) based on the level of contamination in the method blank.

APPENDIX B
FIELD PARAMETERS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location	Analyte Units Date	EH-F mvolts	PH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE degree C	TURBIDITY-F ntu
UCD1-001	02/19/98	130	6.96	999	18.9	1.21
UCD1-004	02/17/98	100	7.33	611	17.7	1.16
UCD1-010	03/02/98	65	7.21	1883	18.6	.19
UCD1-011	02/24/98	106	6.97	1216	18.2	.09
UCD1-012	02/18/98	100	7.14	2190	18.9	.75
UCD1-013	02/18/98	116	7.07	1544	18.6	.36
UCD1-018	02/24/98	86	6.85	821	18.0	.10
UCD1-019	02/19/98	108	7.18	1457	18.9	.06
UCD1-020	02/23/98	107	7.11	641	19.1	--
UCD1-021	02/23/98	132	6.91	1542	19.4	.35
UCD1-022	02/19/98	--	6.5	1170	16.8	.15
UCD1-023	02/17/98	50	7.37	812	18.8	2.27
UCD1-024	02/23/98	124	6.61	1609	19.5	--
UCD1-025	03/04/98	81	7.11	1250	18.7	0.18
UCD1-027Z3	02/25/98	--	6.61	885	17.3	4.16
UCD1-028	03/03/98	66	7.04	1466	18.5	4.80
UCD1-034	03/02/98	-0.006	7.47	600	17.9	4.04
UCD2-007	02/23/98	117	7.10	712	18.2	.44
UCD2-014	02/18/98	122	7.30	987	18.0	.71
UCD2-015	02/17/98	71	7.63	619	17.5	.50
UCD2-016	02/19/98	110	7.43	733	18.1	.05
UCD2-017	02/24/98	89	7.08	622	17.8	.07
UCD2-026	03/04/98	58	7.42	688	18.2	0.11
UCD2-027Z5	02/25/98	94	7.66	711	18.3	0.92
UCD2-029	03/03/98	12	7.24	717	18.1	0.07
UCD2-030	03/03/98	89	7.32	712	18.0	0.16
UCD2-031	03/04/98	85	7.47	676	18.1	0.14
UCD2-032	03/03/98	78	7.24	732	18.1	0.13
UCD2-035	03/02/98	-0.058	7.54	636	17.7	0.25
UCD2-036	03/02/98	67	7.52	670	18.3	0.22
UCD2-037	03/05/98	42	7.43	619	17.7	0.28
UCD2-038	03/02/98	47	7.66	632	17.3	0.81
UCD2-039	03/05/98	-.09	7.42	660	17.8	0.23
UCD2-040	03/04/98	60	7.34	771	18.1	1.15
UCD4-041	03/04/98	76	7.47	671	18.7	4.58
UCD4-042	03/05/98	-44	7.46	737	18.3	0.81
UCD4-043	03/03/98	90	7.34	694	18.7	0.09

APPENDIX B
FIELD PARAMETERS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location	Analyte Units Date	EH-F mvolts	pH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE degree C	TURBIDITY-F ntu
UCD1-004	05/26/98	-11	7.27	661	17.6	0.42
UCD1-010	05/27/98	-19	6.51	1882	18.4	0.34
UCD1-012	05/26/98	38	7.13	1226	18.6	0.14
UCD1-013	05/26/98	14	6.76	1529	18.4	0.13
UCD1-023	06/04/98	-21	7.42	780	18.8	2.00
UCD1-024	05/27/98	-12	7.05	1578	19.5	0.16
UCD1-025	05/27/98	-13	7.07	1235	18.5	0.21
UCD1-028	06/03/98	-2	7.38	1443	18.4	7.66
UCD2-014	05/26/98	-4	7.49	1223	18.1	0.34
UCD2-015	05/26/98	103	7.46	368	17.4	0.15
UCD2-016	05/28/98	11	7.45	791	18.1	0.17
UCD2-026	05/27/98	-27	7.34	731	18.0	0.18
UCD2-029	06/03/98	-20	7.67	714	18.1	0.10
UCD2-030	06/01/98	-89	7.63	621	18.2	0.30
UCD2-031	06/01/98	-83	7.54	618	18.3	0.11
UCD2-032	06/02/98	-70	7.62	728	18.2	0.12
UCD2-035	06/03/98	-84	7.56	628	17.8	0.73
UCD2-036	06/04/98	-63	7.57	667	18.2	0.31
UCD2-037	06/04/98	-49	7.60	621	17.7	0.66
UCD2-038	06/03/98	-83	7.66	634	17.4	0.65
UCD2-039	06/03/98	-42	7.65	675	17.9	0.09
UCD2-040	06/01/98	-75	7.53	725	18.2	0.38
UCD4-041	06/01/98	-68	7.74	634	18.9	6.15
UCD4-042	06/02/98	-67	7.65	711	18.4	0.10
UCD4-043	06/02/98	-62	7.45	722	19.0	0.23

APPENDIX B
FIELD PARAMETERS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location	Date	EH-F	PH-F	SPECIFIC	TEMPERATURE	TURBIDITY-F
		mvolts		CONDUCTANCE (EC-F) umhos/cm	degree C	ntu
UCD1-010	08/27/98	-75	6.83	1739	18.6	0.25
UCD1-011	09/02/98	-53	7.06	1089	18.2	0.19
UCD1-012	08/26/98	-43	7.06	1980	19.0	0.28
UCD1-013	08/26/98	-37	7.67	1385	18.7	0.15
UCD1-018	08/24/98	-41	7.21	900	17.9	0.56
UCD1-020	08/26/98	-63	7.61	592	19.3	0.04
UCD1-021	08/26/98	-25	7.17	1391	19.6	0.13
UCD1-022	08/24/98	-58	7.31	1206	19.5	.34
UCD1-023	08/24/98	-61	7.36	687	18.9	0.93
UCD1-024	08/27/98	-16	7.20	1345	19.8	0.13
UCD1-025	08/27/98	-76	6.84	1096	18.8	2.38
UCD1-028	09/01/98	-046	7.38	1342	18.6	6.77
UCD1-034	08/31/98	-106	7.45	592	18.8	39.8
UCD2-007	08/26/98	-035	7.30	722	18.3	.10
UCD2-014	08/26/98	-033	6.79	1148	18.2	.18
UCD2-016	08/24/98	-76	7.53	693	18.2	.05
UCD2-017	08/24/98	-66	7.51	575	17.8	.30
UCD2-026	08/27/98	-079	7.16	634	18.2	.08
UCD2-029	09/01/98	-064	7.30	729	18.1	.12
UCD2-030	09/01/98	-053	7.37	635	18.1	0.39
UCD2-031	09/01/98	-071	7.36	609	18.3	-0.12
UCD2-032	08/25/98	-37	7.52	746	18.3	.07
UCD2-035	09/02/98	-82	7.26	588	17.7	0.31
UCD2-036	09/02/98	-31	7.15	703	18.2	.49
UCD2-037	09/01/98	-87	7.31	570	17.7	.16
UCD2-038	09/02/98	-47	7.29	609	17.5	0.57
UCD2-039	09/02/98	-61	7.24	677	17.9	0.19
UCD2-040	09/01/98	-47	7.68	687	18.2	0.36
UCD4-041	08/27/98	-62	7.21	661	18.8	4.02
UCD4-042	08/25/98	-83	7.57	661	18.5	0.14
UCD4-043	08/25/98	-1631	7.94	657	18.7	0.04

-- = Not analyzed.

**APPENDIX B
FIELD PARAMETERS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location	Date	Analyte Units	EH-F mvolts	pH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE degree C	TURBIDITY-F ntu
UCD1-004	11/05/98		46	7.26	890	14.1	1.35
UCD1-010	11/09/98		76	7.27	2340	18.3	.16
UCD1-012	11/09/98		74	7.18	2730	18.7	.63
UCD1-013	11/05/98		49	7.01	1880	15.1	.2
UCD1-018	11/09/98		63	7.44	1070	17.7	.2
UCD1-025	11/04/98		50	7.17	1152	18.6	.44
UCD1-028	11/02/98		43	7.23	1340	18.3	.76
UCD2-007	11/05/98		26	7.42	1030	14.6	.31
UCD2-014	11/05/98		21	7.22	1130	14.3	.22
UCD2-015	11/05/98		56	7.51	860	15.3	.25
UCD2-016	11/04/98		55	7.49	571	16.3	.09
UCD2-017	11/09/98		38	7.55	612	17.6	.08
UCD2-026	11/04/98		58	7.49	668	18.1	.13
UCD2-029	11/02/98		15	7.5	735	18	.15
UCD2-030	11/02/98		36	7.56	698	17.9	.34
UCD2-031	11/02/98		2	7.54	655	18.1	0.09
UCD2-032	11/03/98		027	7.43	758	18.2	4.31
UCD2-035	11/03/98		-26	7.52	627	17.5	.46
UCD2-036	11/03/98		57	7.44	700	18.0	.32
UCD2-037	11/04/98		-16	7.57	--	15.6	.06
UCD2-038	11/03/98		6	7.6	656	18.1	.38
UCD2-039	11/03/98		22	7.45	695	17.7	.06
UCD2-040	11/02/98		49	7.5	706	18	1.02
UCD4-041	11/09/98		13	7.57	890	14.3	2.06
UCD4-042	11/10/98		25	7.56	850	18.2	.14
UCD4-043	11/10/98		54	7.56	850	17.6	.07

-- = Not analyzed.

APPENDIX B
METALS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-001	UCD1-004	UCD1-010	UCD1-011	UCD1-012	UCD1-013	UCD1-018	UCD1-019	UCD1-020
Sample ID			GWGW0608	GWGW0601	GWGW0624	GWGW0616	GWGW0606	GWGW0605	GWGW0617	GWGW0609	GWGW0612
Date			02/19/98	02/17/98	03/02/98	02/24/98	02/18/98	02/18/98	02/24/98	02/19/98	02/23/98
QA											
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	--	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<2 B Up
ARSENIC	3	ug/L	--	<3.1	<3.1	<3.1	<3.1	<3.1	4.1 B	<3.1	<3.1
BARIUM	20	ug/L	--	183	43.6	334 E Jk	499	364	186 E Jk	103	120 E Jk
BERYLLIUM	1	ug/L	--	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
CADMIUM	1	ug/L	--	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.30
CALCIUM	2000	ug/L	--	35400	50000	48800	79800	74800	37700	60200	27000
CHROMIUM	10	ug/L	--	9.6 B	67.1	251	178	78.3	16.4	189	30.6
CHROMIUM, HEXAVALENT	10	ug/L	20	6 J	22	256	181	69	8 J	182	19 J Jm
COBALT	10	ug/L	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
COPPER	10	ug/L	--	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
IRON	100	ug/L	--	<2.2 B Up	<2.2	<2.2	<2.2	<2.2	<6.9 B Up	<2.2	<5.8 B Up
LEAD	3	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
MAGNESIUM	2000	ug/L	--	56600	189000	127000 E Jk	246000	193000	97700 E Jk	168000	65100 E Jk
MANGANESE	10	ug/L	--	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
MERCURY	0.2	ug/L	--	<0.10 UJh	<0.10	<0.10	<0.10 UJh	<0.10 UJh	<0.10	<0.10 UJh	<0.10
MOLYBDENUM	10	ug/L	--	0.97 B	<0.9	<0.9	<0.9	<0.9	<1.1 B Uo	<1.3 B Uo	<1.3 B Uo
NICKEL	20	ug/L	--	1.3 B	1.3 B	<0.7	2.0 B	1.2 B	3.7 B	<1.1 B Uo	<0.7
POTASSIUM	2000	ug/L	--	607 B	963 B	669 B	1300 B	1260 B	485 B	1100 B	664 B
SELENIUM	3	ug/L	--	<2.6	14.9	10.8	14.2	<2.6	<2.6	9.3	<2.6
SILVER	10	ug/L	--	<0.9	<2.7 B Up	<0.9	<0.9	<0.9	0.92 B	1 B	<0.9
SODIUM	2000	ug/L	--	31800	168000	81200 E Jk	99100	58400	35800 E Jk	70900	35700 E Jk
THALLIUM	10	ug/L	--	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
VANADIUM	10	ug/L	--	8.1 B	14	12	11.5	12.4	10.9	12.9	15.2
ZINC	20	ug/L	--	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
METALS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD1-020		UCD1-021		UCD1-023		UCD1-024		UCD1-025		UCD1-027Z3		UCD1-028		UCD1-034		UCD2-007	
Sample ID			GWGW0614		GWGW0613		GWGW0603		GWGW0615		GWGW0635		GWGW0619		GWGW0628		GWGW0621		GWGW0611	
Date			02/23/98		02/23/98		02/17/98		02/23/98		03/04/98		02/25/98		03/03/98		03/02/98		02/23/98	
QA			DUPLICATE																	
Analyte	CRDL	Units																		
ANTIMONY	5	ug/L	<2.3	B Up	<2.1	B Up	<1.9		<1.9		<1.9	--		<1.9		<1.9		<3.3	B Up	
ARSENIC	3	ug/L	<3.1		<3.1		<3.1		<3.1		<3.1	--		<3.1		3.3	B	<3.1		
BARIUM	20	ug/L	120	E Jk	166	E Jk	133		309	E Jk	346	--		257		163		162	E Jk	
BERYLLIUM	1	ug/L	<0.07		<0.07		<0.07		<0.07		<0.07	--		<0.07		<0.07		<0.11	B Uo	
CADMIUM	1	ug/L	<0.3		<0.3		<0.3		<0.3		<0.3	--		<0.3		<0.3		<0.3		
CALCIUM	2000	ug/L	26500		56000		38200		63500		46200	--		44400		31200		33800		
CHROMIUM	10	ug/L	30.8		59.1		17.7		32.1		386	--		516		2.3	B	23.5		
CHROMIUM, HEXAVALENT	10	ug/L	28	J m	36	J m	13	J	23	J m	385	<4		555		<4		15	J Jm	
COBALT	10	ug/L	<0.50		<0.50		<0.50		<0.50		<0.50	--		<0.50		0.64	B	<0.50		
COPPER	10	ug/L	<1.2		<1.2		<1.2		<1.2		<1.2	--		<1.2		<1.2		<1.2		
IRON	100	ug/L	<2.2		<2.2		<21.2	B Uo	<2.2		<2.2	--		<6.2	B Up	<10.2	B Up	<2.2		
LEAD	3	ug/L	<1		<1		<1		<1		<1	--		<1		1.7	B	<1		
MAGNESIUM	2000	ug/L	65200	E Jk	142000	E Jk	88600		165000	E Jk	139000	--		146000		46100		66700	E Jk	
MANGANESE	10	ug/L	<0.40		<0.40		1.6		<0.40		<0.40	--		7.2		5.5		<0.40		
MERCURY	0.2	ug/L	<0.10		<0.10		<0.10	J UJh	<0.10		<0.10	--		<0.10		<0.10		<0.10		
MOLYBDENUM	10	ug/L	<1.2	B Uo	<0.9		0.93	B	<0.9		<0.9	--		<0.9		<2	B Uo	<2.3	B Uo	
NICKEL	20	ug/L	<0.7		<0.7		90.1		<0.7		11.4	B	--	27.5		4.4	B	<0.70		
POTASSIUM	2000	ug/L	623	B	1060	B	660	B	940	B	1070	B	--	1040	B	846	B	782	B	
SELENIUM	3	ug/L	<2.6		4.7	B	<2.6		4.2	B	5.5	--		11		<2.6		2.6		
SILVER	10	ug/L	<0.9		<0.9		<0.9		<0.9		<3	B Up	--	<2.6	B Up	<3	B Up	0.94	B	
SODIUM	2000	ug/L	34800	E Jk	99600	E Jk	37300		81300	E Jk	84700	--		93400		57300	J n	44200	E Jk	
THALLIUM	10	ug/L	<3.2		<3.2		<3.2		<3.2		<3.2	--		<3.2		<3.2		<3.2		
VANADIUM	10	ug/L	14.5		11.1		9.2	B	<10.8		9.5	B	--	10.3		10.6		8.9	B	
ZINC	20	ug/L	<0.3		<0.30		<0.3		<0.3		<0.3	--		<0.3		<4.4	B Up	<0.3		

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APPENDIX B
METALS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-014	UCD2-015	UCD2-016	UCD2-017	UCD2-026	UCD2-027Z5	UCD2-029	UCD2-030
Sample ID			GWGW0604	GWGW0602	GWGW0607	GWGW0618	GWGW0636	GWGW0620	GWGW0629	GWGW0630
Date			02/18/98	02/17/98	02/19/98	02/24/98	03/04/98	02/25/98	03/03/98	03/03/98
QA										
Analyte	CRDL	Units								
ANTIMONY	5	ug/L	<1.9	<1.9	<1.9	<1.9	<1.9	--	<1.9	<1.9
ARSENIC	3	ug/L	<3.1	<3.1	<3.1	<3.1	<3.1	--	<3.1	<3.1
BARIUM	20	ug/L	209	147	156	142	149	--	179	178
BERYLLIUM	1	ug/L	<0.07	<0.07	<0.12	B Uo	<0.07	--	<0.07	<0.07
CADMIUM	1	ug/L	<0.3	<0.3	<0.3		<0.3	--	<0.3	<0.3
CALCIUM	2000	ug/L	45400	35300	36900	36400	40100	--	40100	41000
CHROMIUM	10	ug/L	34.4	6.4	31.5	10	13.4	--	14.8	14.3
CHROMIUM, HEXAVALENT	10	ug/L	32	<4	28	5	10	6	10	10
COBALT	10	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	--	<0.50	<0.50
COPPER	10	ug/L	<1.2	<1.2	<1.2	<1.2	<1.2	--	<1.2	<1.2
IRON	100	ug/L	<2.2	<14.8	<2.2	<2.2	<7.6	--	<22.9	<2.2
LEAD	3	ug/L	<1	1.1	<1	<1	<1	--	<1	<1
MAGNESIUM	2000	ug/L	112000	61400	64400	61500	67400	--	68200	68100
MANGANESE	10	ug/L	<0.40	<0.40	<0.40	<0.40	7.0	--	0.72	<0.40
MERCURY	0.2	ug/L	<0.10	<0.10	0.15	<0.10	<0.10	--	<0.10	<0.10
MOLYBDENUM	10	ug/L	<0.9	1.5	<2.1	<1.8	1.6	--	<1.9	<1.6
NICKEL	20	ug/L	1.6	4.9	<0.7	<0.7	20.9	--	5.9	0.86
POTASSIUM	2000	ug/L	794	670	693	640	847	--	761	830
SELENIUM	3	ug/L	<2.6	<2.6	2.6	<2.6	<2.6	--	<2.6	<2.6
SILVER	10	ug/L	<0.9	<0.9	<0.9	<0.9	<2.9	--	<2.8	<3
SODIUM	2000	ug/L	41900	28600	46500	31000	35700	--	36600	36800
THALLIUM	10	ug/L	<3.2	<3.2	<3.2	<3.2	<3.2	--	<3.2	<3.2
VANADIUM	10	ug/L	9	8.6	8.3	9	9.1	--	9.6	9.6
ZINC	20	ug/L	<0.3	<0.3	<0.3	<0.3	<4.7	--	<0.3	<0.3

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WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

		Location	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039
		Sample ID	GWGW0631	GWGW0634	GWGW0626	GWGW0622	GWGW0625	GWGW0637	GWGW0623	GWGW0638
		Date	03/03/98	03/04/98	03/03/98	03/02/98	03/02/98	03/05/98	03/02/98	03/05/98
		QA	DUPLICATE							
Analyte	CRDL	Units								
ANTIMONY	5	ug/L	<1.9	<1.9	<1.9	<1.9	<1.9	2.8 B	<1.9	<1.9
ARSENIC	3	ug/L	<3.1	<3.1	<3.1	3.9 B	<3.1	<3.1	<3.1	<3.1
BARIUM	20	ug/L	178	174	188	158	141	147	137	161
BERYLLIUM	1	ug/L	<0.07	<0.07	<0.07	<0.07	<0.07	<0.1 B Uo	<0.07	<0.07
CADMIUM	1	ug/L	<0.3	<0.3	<0.3	<0.3	<0.65 B Uo	<0.3	<0.3	<0.3
CALCIUM	2000	ug/L	41000	40600	42200	36500	36800	38900	33400	39800
CHROMIUM	10	ug/L	14.4	13.5	20.1	4.5 B	16.6	8 B	4.7 B	6.9 B
CHROMIUM, HEXAVALENT	10	ug/L	12 J	12 J	15 J	<4	8 J	14 J J	<4	14 J J
COBALT	10	ug/L	<0.50	<0.50	<0.50	0.50 B	<0.50	<0.67 B Up	<0.50	<0.65 B Up
COPPER	10	ug/L	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
IRON	100	ug/L	<2.2	<2.2	<2.2	50.1 B	<12.1 B Up	<6.9 B Up	<2.2	<10.1 B Up
LEAD	3	ug/L	<1	<1	<1	<1	<1	<1	<1	<1
MAGNESIUM	2000	ug/L	68100	64600	69200	59600	62700	63800	63000	68100
MANGANESE	10	ug/L	<0.40	<0.40	<0.40	4.2	<0.40	<0.4	34.0	<0.4
MERCURY	0.2	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MOLYBDENUM	10	ug/L	<2 B Uo	<1.2 B Uo	<1.1 B Uo	<2.3 B Uo	<1.7 B Uo	4 B	<1.9 B Uo	2.7 B
NICKEL	20	ug/L	1.7 B	2.0 B	0.81 B	3.2 B	<0.7	1 B	2.1 B	1.5 B
POTASSIUM	2000	ug/L	818 B	843 B	817 B	787 B	801 B	726 B	815 B	793 B
SELENIUM	3	ug/L	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6
SILVER	10	ug/L	<2.5 B Up	<2.6 B Up	<2.7 B Up	<2.9 B Up	<2.9 B Up	<2.5 B Up	<2.7 B Up	<2.3 B Up
SODIUM	2000	ug/L	36500	37900	38900	37500	39500	31500 E Jk	32200	35400 E Jk
THALLIUM	10	ug/L	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
VANADIUM	10	ug/L	9.5 B	9.9 B	9.7 B	9.4 B	9.5 B	10.2	8.5 B	10
ZINC	20	ug/L	<0.3	<0.3	<0.3	<0.43 B Up	<4.1 B Up	<1.2 B Up	<0.3	<0.3

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WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-040	UCD4-041	UCD4-042	UCD4-043
	Sample ID	Date	GWGW0633	GWGW0632	GWGW0639	GWGW0627
	CRDL	QA	03/04/98	03/04/98	03/05/98	03/03/98
		Units				
ANTIMONY	5	ug/L	<1.9	<1.9	<1.9	<1.9
ARSENIC	3	ug/L	<3.1	3.8 B	<3.1	<3.1
BARIUM	20	ug/L	197	125	170	149
BERYLLIUM	1	ug/L	<0.07	<0.07	<0.07	<0.07
CADMIUM	1	ug/L	<0.3	<0.3	<0.33 B Up	<0.3
CALCIUM	2000	ug/L	44500	34500	42800	35400
CHROMIUM	10	ug/L	31.9	22.3	24.5	30.2
CHROMIUM, HEXAVALENT	10	ug/L	16 J	10 J	35	23
COBALT	10	ug/L	<0.50	<0.50	<0.50	<0.50
COPPER	10	ug/L	<1.2	<1.2	<1.2	<1.2
IRON	100	ug/L	<3.6 B Up	<3.6 B Up	<6.3 B Up	<6.1 B Up
LEAD	3	ug/L	<1	<1	<1	<1
MAGNESIUM	2000	ug/L	74200	53500	73800	59300
MANGANESE	10	ug/L	<0.40	0.66	0.41	<0.40
MERCURY	0.2	ug/L	<0.10	<0.10	<0.10	<0.10
MOLYBDENUM	10	ug/L	<1.6 B Uo	<1.4 B Uo	1.7 B	<1.2 B Uo
NICKEL	20	ug/L	<0.7	0.84 B	<0.7	0.76 B
POTASSIUM	2000	ug/L	870 B	1690 B	1200 B	1100 B
SELENIUM	3	ug/L	<2.6	<2.6	3.1 B	<2.6
SILVER	10	ug/L	<2.6 B Up	<2.8 B Up	<2.4 B Up	<2.7 B Up
SODIUM	2000	ug/L	40700	47500	43100 E Jk	47200
THALLIUM	10	ug/L	<3.2	<3.2	3.6 B	<3.2
VANADIUM	10	ug/L	9.5 B	9.1 B	8.1 B	9.2 B
ZINC	20	ug/L	<0.3	<0.3	<0.3	<0.3

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METALS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD1-004	UCD1-010	UCD1-010	UCD1-012	UCD1-013	UCD1-025	UCD1-028	UCD2-014	UCD2-016	UCD2-026
Sample ID			GWGW0640	GWGW0645	GWGW0646	GWGW0641	GWGW0642	GWGW0647	GWGW0660	GWGW0643	GWGW0650	GWGW0648
Date			05/26/98	05/27/98	05/27/98	05/26/98	05/26/98	05/27/98	06/03/98	05/26/98	05/28/98	05/27/98
QA					DUPLICATE							
Analyte	CRDL	Units										
ANTIMONY	5	ug/L	--	--	--	--	--	--	<2.5	<2.7 B Uo	<2.5	--
ARSENIC	3	ug/L	--	--	--	--	--	--	<4.0	4.1	6.4	--
BARIUM	20	ug/L	--	--	--	--	--	--	243	250	176	--
BERYLLIUM	1	ug/L	--	--	--	--	--	--	<0.13	<0.2	<0.2	--
CADMIUM	1	ug/L	--	--	--	--	--	--	<1.1	<1.2	<1.2	--
CALCIUM	2000	ug/L	--	--	--	--	--	--	47300	56200	43500	--
CHROMIUM	10	ug/L	--	--	--	--	--	--	526	53.6	38.6	--
CHROMIUM, HEXAVALENT	10	ug/L	<9 J UJhp	64	56	160 Jh	72 Jh	360	510	48 Jh	42	21
COBALT	10	ug/L	--	--	--	--	--	--	<0.82	<0.9	<0.9	--
COPPER	10	ug/L	--	--	--	--	--	--	0.83 B	<0.8	<0.8	--
IRON	100	ug/L	--	--	--	--	--	--	<2.5	<8.9 B Up	<2.6	--
LEAD	3	ug/L	--	--	--	--	--	--	<1.5	<2.0	<2.0	--
MAGNESIUM	2000	ug/L	--	--	--	--	--	--	160000	148000	77000	--
MANGANESE	10	ug/L	--	--	--	--	--	--	0.67 B	<0.4	<0.4	--
MERCURY	0.2	ug/L	--	--	--	--	--	--	<0.1	<0.1	<0.1	--
MOLYBDENUM	10	ug/L	--	--	--	--	--	--	<0.81	2 B	1.7 B	--
NICKEL	20	ug/L	--	--	--	--	--	--	5.4 B	<1.1	<1.1	--
POTASSIUM	2000	ug/L	--	--	--	--	--	--	1050 B	824 B	742 B	--
SELENIUM	3	ug/L	--	--	--	--	--	--	12.7	<3.4 Uo	<5.6 Uo	--
SILVER	10	ug/L	--	--	--	--	--	--	<2.0	<3.2 B Uo	<2.8 B Uo	--
SODIUM	2000	ug/L	--	--	--	--	--	--	111000	47200	52700	--
THALLIUM	10	ug/L	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
VANADIUM	10	ug/L	--	--	--	--	--	--	11.3	9.9 B	9.2 B	--
ZINC	20	ug/L	--	--	--	--	--	--	<2.6	<2.7	<2.7	--

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Location Sample ID Date QA			UCD2-029 GWGW0661 06/03/98	UCD2-030 GWGW0652 06/01/98	UCD2-031 GWGW0653 06/01/98	UCD2-032 GWGW0657 06/02/98	UCD2-035 GWGW0663 06/03/98	UCD2-036 GWGW0662 06/04/98	UCD2-037 GWGW0664 06/04/98	UCD2-038 GWGW0665 06/03/98	UCD2-039 GWGW0658 06/03/98
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	<2.5	<2.5	<2.5	<2.5	--	<2.5	<2.5	<2.5	<2.5
ARSENIC	3	ug/L	<4.0	<4.0	<4.0	4.3	--	<4.0	<4.0	<4.0	<4.0
BARIUM	20	ug/L	165	155	152	167	--	134	141	141	155
BERYLLIUM	1	ug/L	<0.13	<0.13	<0.13	<0.13	--	<0.13	<0.13	<0.13	<0.13
CADMIUM	1	ug/L	<1.1	<1.1	<1.1	<1.1	--	<1.1	<1.1	<1.1	<1.1
CALCIUM	2000	ug/L	41300	40000	39400	40300	--	37200	38900	35800	39900
CHROMIUM	10	ug/L	14.5	11.9	12.6	26.5	4.7 B	15.3	7.3 B	5.7 B	8.3 B
CHROMIUM, HEXAVALENT	10	ug/L	13	12	12	26	<4	14	6 J	5 J	8 J
COBALT	10	ug/L	<0.82	<0.82	<0.82	<0.82	--	<0.82	<0.82	<0.82	<0.82
COPPER	10	ug/L	<0.74	<0.74	1.4 B	<0.74	--	<0.74	<0.74	1.1 B	<0.74
IRON	100	ug/L	<2.5	<2.5	<2.5	<2.5	--	<2.5	<2.5	<2.5	<2.5
LEAD	3	ug/L	<1.5	<1.5	<1.5	<1.5	--	<1.5	<1.5	<1.5	<1.5
MAGNESIUM	2000	ug/L	70600	66900	63800	68000	--	63500	63500	68100	68100
MANGANESE	10	ug/L	<0.4	<0.4	<0.4	<0.4	--	2.7 B	<0.4	<0.4	2.2 B
MERCURY	0.2	ug/L	<0.1	<0.1	<0.1	<0.1	--	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM	10	ug/L	<1.8 B Uo	<2.1 B Uo	<1.9 B Uo	<0.89 B Uo	--	<1.4 B Uo	<1.9 B Uo	<1.7 B Uo	<1.9 B Uo
NICKEL	20	ug/L	<1.1	<1.1	1.5 B	1.4 B	--	<1.1	<1.1	1.3 B	<1.1
POTASSIUM	2000	ug/L	763 B	788 B	760 B	824 B	--	746 B	666 B	727 B	740 B
SELENIUM	3	ug/L	<2.4	<2.4	<2.4	<2.4	--	<2.4	<2.4	<2.4	<2.4
SILVER	10	ug/L	<2.0	<2.0	<2.0	<2.0	--	<2.0	<2.0	<2.0	<2.0
SODIUM	2000	ug/L	37600	35200	35200	48800	--	38900	31200	33300	34900
THALLIUM	10	ug/L	<4.0	<4.0	<4.0	<4.0	--	<4.0	<4.0	<4.0	<4.0
VANADIUM	10	ug/L	9.4 B	9.3 B	9.3 B	9.8 B	--	9.0 B	9.4 B	9.0 B	9.2 B
ZINC	20	ug/L	<2.6	<2.6	<2.6	<2.6	--	<2.6	<2.6	<2.6	<2.6

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1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-040	UCD4-041	UCD4-042	UCD4-043
	Sample ID	Units	GWGW0654	GWGW0651	GWGW0655	GWGW0659
	CRDL		Date	Date	Date	Date
			QA			
ANTIMONY	5	ug/L	<2.5	<2.5	<2.5	<2.5
ARSENIC	3	ug/L	<4.0	<4.0	<4.0	4.1
BARIUM	20	ug/L	194	141	158	145
BERYLLIUM	1	ug/L	<0.13	<0.13	<0.13	<0.13
CADMIUM	1	ug/L	<1.1	<1.1	<1.1	<1.1
CALCIUM	2000	ug/L	48200	40100	40400	38700
CHROMIUM	10	ug/L	36.0	23.3	22.8	26.5
CHROMIUM, HEXAVALENT	10	ug/L	35	23	21	26
COBALT	10	ug/L	<0.82	<0.82	<0.82	<0.82
COPPER	10	ug/L	<0.74	0.83 B	<0.74	<0.74
IRON	100	ug/L	<2.5	<2.5	<2.5	<2.5
LEAD	3	ug/L	1.5 B	<1.5	<1.5	<1.5
MAGNESIUM	2000	ug/L	81500	62000	67100	65000
MANGANESE	10	ug/L	<0.4	<0.4	<0.4	<0.4
MERCURY	0.2	ug/L	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM	10	ug/L	<1.4 B Uo	<2.5 B Uo	<2.0 B Uo	<1.4 B Uo
NICKEL	20	ug/L	<1.1	<1.1	<1.1	<1.1
POTASSIUM	2000	ug/L	874 B	1270 B	853 B	1090 B
SELENIUM	3	ug/L	<2.4	<2.4	<2.4	<2.4
SILVER	10	ug/L	<2.0	<2.0	<2.0	<2.0
SODIUM	2000	ug/L	42300	49700	40700	48500
THALLIUM	10	ug/L	<4.0	<4.0	<4.0	<4.0
VANADIUM	10	ug/L	9.2 B	9.4 B	9.3 B	9.0 B
ZINC	20	ug/L	<2.6	<2.6	<2.6	<2.6

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.
-- = Not Analyzed.

APPENDIX B
METALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-010	UCD1-011	UCD1-012	UCD1-013	UCD1-013	UCD1-018	UCD1-020	UCD1-025	UCD1-028
Sample ID			GWGW0721	GWGW0722	GWGW0701	GWGW0694	GWGW0695	GWGW0689	GWGW0702	GWGW0709	GWGW0712
Date			08/27/98	09/02/98	08/26/98	08/26/98	08/26/98	08/24/98	08/26/98	08/27/98	09/01/98
QA							DUPLICATE				
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	--	--	--	--	--	--	--	--	<0.060 B Uop
ARSENIC	3	ug/L	--	--	--	--	--	--	--	--	2.4 B
BARIUM	20	ug/L	--	--	--	--	--	--	--	--	260 E
BERYLLIUM	1	ug/L	--	--	--	--	--	--	--	--	<0.02
CADMIUM	1	ug/L	--	--	--	--	--	--	--	--	<0.060
CALCIUM	2000	ug/L	53800	--	--	--	--	--	--	--	50500
CHROMIUM	10	ug/L	--	--	--	--	--	--	--	--	465 E
CHROMIUM, HEXAVALENT	10	ug/L	26	224	155	78	76	24	31	300	540
COBALT	10	ug/L	--	--	--	--	--	--	--	--	0.18 B
COPPER	10	ug/L	--	--	--	--	--	--	--	--	1.1 B
IRON	100	ug/L	--	--	--	--	--	--	--	--	373
LEAD	3	ug/L	--	--	--	--	--	--	--	--	<0.2
MAGNESIUM	2000	ug/L	212000	--	--	--	--	--	--	--	174000
MANGANESE	10	ug/L	--	--	--	--	--	--	--	--	1.5 B
MERCURY	0.2	ug/L	--	--	--	--	--	--	--	--	<0.20
MOLYBDENUM	10	ug/L	--	--	--	--	--	--	--	--	0.64 B
NICKEL	20	ug/L	--	--	--	--	--	--	--	--	4.1 B
POTASSIUM	2000	ug/L	953	--	--	--	--	--	--	--	1010
SELENIUM	3	ug/L	--	--	--	--	--	--	--	--	13.5
SILVER	10	ug/L	--	--	--	--	--	--	--	--	<0.50
SODIUM	2000	ug/L	193000	--	--	--	--	--	--	--	112000
THALLIUM	10	ug/L	--	--	--	--	--	--	--	--	<0.05
VANADIUM	10	ug/L	--	--	--	--	--	--	--	--	6.9 B
ZINC	20	ug/L	--	--	--	--	--	--	--	--	9.8 B

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APPENDIX B
METALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-034	UCD2-007	UCD2-014	UCD2-016	UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-031
Sample ID			GWGW0716	GWGW0704	GWGW0696	GWGW0688	GWGW0692	GWGW0710	GWGW0713	GWGW0714	GWGW0715
Date			08/31/98	08/26/98	08/26/98	08/24/98	08/24/98	08/27/98	09/01/98	09/01/98	09/01/98
QA											
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	--	--	<0.050	<0.050	--	--	<0.08 B Uop	<0.15 B Uop	<0.15 B Uop
ARSENIC	3	ug/L	--	--	<1.8	2.2 B	--	--	2.5 B	2.0 B	2.2 B
BARIUM	20	ug/L	--	--	270	166	--	--	186 E	156 E	150 E
BERYLLIUM	1	ug/L	--	--	<0.02	0.03 B	--	--	<0.02	0.02 B	<0.02
CADMIUM	1	ug/L	--	--	<0.060	0.07 B	--	--	<0.060	<0.060	<0.060
CALCIUM	2000	ug/L	--	--	--	--	--	--	47900	41900	41200
CHROMIUM	10	ug/L	--	45.6	51.2	31.9	10.5	25.3	19.6 E	13.1 E	13.2 E
CHROMIUM, HEXAVALENT	10	ug/L	<6	38	54	36	7 J	12	21	15	14
COBALT	10	ug/L	--	--	1.2	0.56 B	--	--	0.16 B	0.26 B	0.20 B
COPPER	10	ug/L	--	--	<1.3 B Uo	<1.2 B Uo	--	--	1.0 B	0.84 B	0.93 B
IRON	100	ug/L	--	--	447	298	--	--	335	304	294
LEAD	3	ug/L	--	--	<0.2	<0.2	--	--	<0.2	<0.2	<0.2
MAGNESIUM	2000	ug/L	--	--	--	--	--	--	83900	71200	68500
MANGANESE	10	ug/L	--	--	0.37 B	1.3 B	--	--	0.28 B	0.44 B	0.52 B
MERCURY	0.2	ug/L	--	--	<0.10	<0.10	--	--	<0.10	<0.10	<0.10
MOLYBDENUM	10	ug/L	--	--	<0.77 B Uo	<1.8 Uo	--	--	1.8 B	1.8 B	1.6 B
NICKEL	20	ug/L	--	--	2.8 B	1.7 B	--	--	1.9 B	1.5 B	2.0 B
POTASSIUM	2000	ug/L	--	--	--	--	--	--	767	756	715
SELENIUM	3	ug/L	--	--	<2.3	<2.3	--	--	2.8 B	<2.3	<2.3
SILVER	10	ug/L	--	--	<0.50	<0.50	--	--	<0.50	<0.50	<0.50
SODIUM	2000	ug/L	--	--	--	--	--	--	39000	35300	35400
THALLIUM	10	ug/L	--	--	<0.05	0.11 B	--	--	<0.05	<0.050	<0.05
VANADIUM	10	ug/L	--	--	9.7 B	8.4 B	--	--	8.1 B	8.0 B	8.5 B
ZINC	20	ug/L	--	--	13.5 B	10.4 B	--	--	14.9 B	7.1 B	7.6 B

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**APPENDIX B
METALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD2-032 GWGW0698 08/25/98	UCD2-035 GWGW0706 09/02/98	UCD2-036 GWGW0718 09/02/98	UCD2-037 GWGW0719 09/01/98	UCD2-038 GWGW0720 09/02/98	UCD2-039 GWGW0705 09/02/98	UCD2-039 GWGW0717 09/02/98 DUPLICATE	UCD2-040 GWGW0707 09/01/98	UCD4-041 GWGW0708 08/27/98
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	<0.050	--	<0.08 B Up	<0.11 B Uop	<0.07 B	<0.07 B Upc	0.09 B Up	<0.05 B Uop	<0.20 B Uop
ARSENIC	3	ug/L	2.4 B	--	2.1 B	2.1 B	2.6 B	2.2 B	2.4 B	2.4 B	2.7 B
BARIUM	20	ug/L	198	--	164	138 E	146	167	173	180 E	150 E
BERYLLIUM	1	ug/L	<0.02	--	<0.02	<0.020	<0.02	<0.02	<0.02	<0.02	0.04 B
CADMIUM	1	ug/L	<0.060	--	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
CALCIUM	2000	ug/L	46100 Jm	36700	42600	39300	36300	42000	41800	44300	43400
CHROMIUM	10	ug/L	37.1	7.0 B	19.9	5.6 B	10.2	12.4	12.5	34.3 E	21.1 E
CHROMIUM, HEXAVALENT	10	ug/L	40	<6	16	<6	<6	10	10	40	13
COBALT	10	ug/L	0.13 B	--	0.13 B	0.15 B	0.19 B	0.17 B	0.19 B	0.12 B	0.25 B
COPPER	10	ug/L	<1.1 B Uo	--	0.69 B	1.3 B	1.1 B	0.39 B	0.84 B	0.83 B	0.55 B
IRON	100	ug/L	338	--	337	280	289	317	322	333	315
LEAD	3	ug/L	<0.2	--	0.56 B	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MAGNESIUM	2000	ug/L	80200 Jm	61800	74400	66200	71000	73800	73600	76200	68200
MANGANESE	10	ug/L	0.06 B	--	0.520 B	0.550 B	0.55 B	0.39 B	0.57 B	<0.080	0.97 B
MERCURY	0.2	ug/L	<0.10	--	<0.10	<0.10	<0.10	<0.12 B Up	<0.10	<0.10	<0.10
MOLYBDENUM	10	ug/L	<1.3 B Uo	--	1.5 B	1.9 B	1.8 B	2.0 B	2.0 B	1.6 B	1.3 B
NICKEL	20	ug/L	2.1 B	--	1.5 B	1.4 B	1.5 B	1.4 B	1.7 B	1.5 B	1.4 B
POTASSIUM	2000	ug/L	841	692	717	619	656	729	709	768	1060
SELENIUM	3	ug/L	4.1	--	<2.3	<2.3	<2.3	<2.3	2.8 B	4.0	3.6
SILVER	10	ug/L	<0.50	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SODIUM	2000	ug/L	50800	32900	39200	30100	31600	35000	34800	38700	46900
THALLIUM	10	ug/L	<0.05	--	<0.050	<0.050	<0.050	<0.05	0.05 B	<0.05	<0.26 B Uo
VANADIUM	10	ug/L	9.8 B	--	7.8 B	8.3 B	8.1 B	8.2 B	8.4 B	8.5 B	8.1 B
ZINC	20	ug/L	9.4 B	--	7.1 B	6.8 B	5.4 B	6.4 B	11.5 B	9.1 B	5.5 B

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**APPENDIX B
METALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD4-042		UCD4-043	
Sample ID			GWGW0699		GWGW0700	
Date			08/25/98		08/25/98	
QA						
Analyte	CRDL	Units				
ANTIMONY	5	ug/L	<0.050		<0.050	
ARSENIC	3	ug/L	2.0	B	2.5	B
BARIUM	20	ug/L	174		151	
BERYLLIUM	1	ug/L	<0.02		<0.02	
CADMIUM	1	ug/L	0.47	B	<0.060	
CALCIUM	2000	ug/L	41300	Jm	39800	Jm
CHROMIUM	10	ug/L	27.3		23.4	
CHROMIUM, HEXAVALENT	10	ug/L	28		24	
COBALT	10	ug/L	0.12	B	0.10	B
COPPER	10	ug/L	<1.2	B Uo	<0.84	B Uo
IRON	100	ug/L	310		273	
LEAD	3	ug/L	<0.2		<0.2	
MAGNESIUM	2000	ug/L	69500	Jm	69300	Jm
MANGANESE	10	ug/L	1.6	B	0.40	B
MERCURY	0.2	ug/L	<0.10		<0.10	
MOLYBDENUM	10	ug/L	<1.4	B Uo	<1.2	B Uo
NICKEL	20	ug/L	1.5	B	1.4	B
POTASSIUM	2000	ug/L	861		1050	
SELENIUM	3	ug/L	<2.3		2.8	B
SILVER	10	ug/L	<0.50		<0.50	
SODIUM	2000	ug/L	41100		45300	
THALLIUM	10	ug/L	<0.05		<0.050	
VANADIUM	10	ug/L	9.4	B	9.3	B
ZINC	20	ug/L	7.1	B	6.2	B

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APPENDIX B
METALS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

			Location	UCD1-011	UCD1-012	UCD1-025	UCD1-028	UCD1-028	UCD2-007	UCD2-007	UCD2-014
			Sample ID	GWGW0756	GWGW0757	GWGW0745	GWGW0734	GWGW0735	GWGW0752	GWGW0753	GWGW0754
			Date	11/09/98	11/09/98	11/04/98	11/02/98	11/02/98	11/05/98	11/05/98	11/05/98
			QA					DUPLICATE		DUPLICATE	
Analyte	CRDL	Units									
ANTIMONY	5	ug/L	--	--	--	--	<0.17 B Upo	<0.10 B Upo	--	--	<0.12 B Upo
ARSENIC	3	ug/L	--	--	--	--	2.3 B	2.2 B	--	--	<3.0
BARIUM	20	ug/L	--	--	--	--	285	283	--	--	179
BERYLLIUM	1	ug/L	--	--	--	--	0.03 B	<1.0	--	--	<1.0
CADMIUM	1	ug/L	--	--	--	--	<1.0	<1.0	--	--	<1.0
CALCIUM	2000	ug/L	--	--	--	--	47700	47300	--	--	--
CHROMIUM	10	ug/L	--	--	--	--	495	491	--	--	27.5
CHROMIUM, HEXVALENT	10	ug/L	62.0	164	300	510	500	32.0	32.0	32.0	27.0
COBALT	10	ug/L	--	--	--	--	0.16 B	0.16 B	--	--	0.41 B
COPPER	10	ug/L	--	--	--	--	2.7 B	1.8 B	--	--	0.77 B
IRON	100	ug/L	--	--	--	--	307	306	--	--	162
LEAD	3	ug/L	--	--	--	--	<3.0	<3.0	--	--	<3.0
MAGNESIUM	2000	ug/L	--	--	--	--	165000	164000	--	--	--
MANGANESE	10	ug/L	--	--	--	--	<1.8 B UJfp	8.3 B Jf	--	--	<0.50 B Up
MERCURY	0.2	ug/L	--	--	--	--	<0.2	<0.2	--	--	<.2
MOLYBDENUM	10	ug/L	--	--	--	--	<0.91 B Uo	<0.77 B Uo	--	--	1.2 B
NICKEL	20	ug/L	--	--	--	--	3.5 B	3.2 B	--	--	1.7 B
POTASSIUM	2000	ug/L	--	--	--	--	1050	1050	--	--	--
SELENIUM	3	ug/L	--	--	--	--	13.2	11.9	--	--	<3.0
SILVER	10	ug/L	--	--	--	--	0.51 B	<10.0	--	--	<10.0
SODIUM	2000	ug/L	--	--	--	--	107000	106000	--	--	--
THALLIUM	10	ug/L	--	--	--	--	0.48 B	0.12 B	--	--	<10.0
VANADIUM	10	ug/L	--	--	--	--	<8.5 B Uo	<8.7 B Uo	--	--	8.5 B
ZINC	20	ug/L	--	--	--	--	58.4 Jf	24.4 Jf	--	--	17.2 B

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FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD2-015	UCD2-016	UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-031	UCD2-032
Sample ID			GWGW0755	GWGW0747	GWGW0748	GWGW0746	GWGW0736	GWGW0737	GWGW0738	GWGW0740
Date			11/05/98	11/04/98	11/04/98	11/04/98	11/02/98	11/02/98	11/02/98	11/03/98
QA										
Analyte	CRDL	Units								
ANTIMONY	5	ug/L	--	<0.16 B Uo	--	--	<0.14 B Upo	<0.11 B Upo	<0.09 B Upo	<0.23 B Upo
ARSENIC	3	ug/L	--	2.1 B	--	--	2.5 B	2.3 B	2.6 B	2.3 B
BARIUM	20	ug/L	--	161	--	--	202	181	175	207
BERYLLIUM	1	ug/L	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0
CADMIUM	1	ug/L	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0
CALCIUM	2000	ug/L	--	--	--	--	44700	42500	40100	44100
CHROMIUM	10	ug/L	17.8	28.6	10.6	18.6	22.6	17.4	17.2	32.9
CHROMIUM, HEXAVALENT	10	ug/L	14.0	28.0	10.0	17.0	20.0	18.0	17.0	<10.0
COBALT	10	ug/L	--	0.43 B	--	--	0.15 B	0.19 B	0.11 B	0.13 B
COPPER	10	ug/L	--	0.52 B Jc	--	--	1.0 B	1.4 B	1.0 B	0.84 B
IRON	100	ug/L	--	151	--	--	292	244	231	256
LEAD	3	ug/L	--	<3.0	--	--	<3.0	<3.0	<3.0	<3.0
MAGNESIUM	2000	ug/L	--	--	--	--	78900	73100	67100	76100
MANGANESE	10	ug/L	--	<0.31 B Up	--	--	<0.82 B Up	<0.46 B Upo	<0.57 B Up	<0.71 B Upo
MERCURY	0.2	ug/L	--	<.25	--	--	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM	10	ug/L	--	1.5 B	--	--	1.8 B	1.8 B	1.6 B	1.5 B
NICKEL	20	ug/L	--	1.3 B	--	--	2.4 B	1.9 B	2.6 B	2.3 B
POTASSIUM	2000	ug/L	--	--	--	--	815	853	778	870
SELENIUM	3	ug/L	--	<3.0	--	--	<3.0	<3.0	<3.0	2.4 B
SILVER	10	ug/L	--	0.50 B	--	--	<10.0	<10.0	<10.0	<10.0
SODIUM	2000	ug/L	--	--	--	--	38000	35700	34700	47100
THALLIUM	10	ug/L	--	0.25 B	--	--	0.08 B	<10.0	<10.0	<10.0
VANADIUM	10	ug/L	--	8.2 B	--	--	9.3 B	<8.4 B Uo	9.5 B	9.5 B
ZINC	20	ug/L	--	15.9 B	--	--	16.5 B	14.7 B	14.6 B	16.3 B

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APPENDIX B
METALS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041
Sample ID			GWGW0741	GWGW0742	GWGW0749	GWGW0743	GWGW0744	GWGW0739	GWGW0759
Date			11/03/98	11/03/98	11/04/98	11/03/98	11/03/98	11/02/98	11/09/98
QA									
Analyte	CRDL	Units							
ANTIMONY	5	ug/L	--	<0.12 B Upo	<0.14 B Upo	<0.17 B Upo	<0.12 B Upo	<0.08 B Upo	<0.11 B Upo
ARSENIC	3	ug/L	--	2.3 B	1.9 B	2.6 B	2.2 B	2.4 B	2.9 B
BARIUM	20	ug/L	--	170	150	164	184	186	154
BERYLLIUM	1	ug/L	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CADMIUM	1	ug/L	--	<1.0	<1.0	<1.0	<1.0	<1.0	<0.06 B Up
CALCIUM	2000	ug/L	--	39600	37000	35400	40400	41700	41500
CHROMIUM	10	ug/L	6.9 B	18.7	6.8 B	15.4	16.6	30.0	22.7
CHROMIUM, HEXAVALENT	10	ug/L	10.0	<10.0	<10.0	<10.0	<10.0	31.0	23.0
COBALT	10	ug/L	--	0.11 B	0.12 B	0.18 B	0.17 B	0.13 B	0.09 B
COPPER	10	ug/L	--	0.87 B	0.75 B Jc	1.0 B	0.98 B	2.3 B	1.3 B
IRON	100	ug/L	--	250	142	223	248	251	133
LEAD	3	ug/L	--	<3.0	<3.0	0.81 B	<3.0	<3.0	0.31 B
MAGNESIUM	2000	ug/L	--	69000	62700	70000	71700	72200	66300
MANGANESE	10	ug/L	--	<1.6 B Up	<0.38 B Upo	<0.39 B Upo	<0.50 B Upo	<0.89 B Up	0.67 B
MERCURY	0.2	ug/L	--	<0.2	<.25	<0.2	<0.2	<0.2	<0.2
MOLYBDENUM	10	ug/L	--	1.7 B	1.9 B	1.9 B	2.2 B	1.6 B	1.6 B
NICKEL	20	ug/L	--	2.4 B	1.7 B	1.8 B	1.9 B	1.9 B	1.4 B
POTASSIUM	2000	ug/L	--	734	667	717	770	842	1120
SELENIUM	3	ug/L	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
SILVER	10	ug/L	--	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SODIUM	2000	ug/L	--	37800	29200	31900	34800	37600	46500
THALLIUM	10	ug/L	--	<10.0	0.07 B	<10.0	<10.0	<10.0	0.37 B
VANADIUM	10	ug/L	--	<8.4 B Uo	8.6 B	9.4 B	9.0 B	<8.8 B Uo	8.3 B
ZINC	20	ug/L	--	14.6 B	14.9 B	13.5 B	15.1 B	16.0 B	14.3 B

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**APPENDIX B
METALS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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DAVIS, CALIFORNIA**

Analyte	CRDL	Units	Location Sample ID Date QA		UCD4-042 GWGW0760 11/10/98		UCD4-043 GWGW0761 11/10/98	
ANTIMONY	5	ug/L			<0.08	B Upo	<0.08	B Upo
ARSENIC	3	ug/L			2.1	B	2.7	B
BARIUM	20	ug/L			170		155	
BERYLLIUM	1	ug/L			<1.0		<1.0	
CADMIUM	1	ug/L			<1.0		<1.0	
CALCIUM	2000	ug/L			41300		40500	
CHROMIUM	10	ug/L			24.0		25.9	
CHROMIUM, HEXVALENT	10	ug/L			29.0		31.0	
COBALT	10	ug/L			0.07	B	0.07	B
COPPER	10	ug/L			0.51	B	1.4	B
IRON	100	ug/L			126		134	
LEAD	3	ug/L			<3.0		<3.0	
MAGNESIUM	2000	ug/L			70700		70400	
MANGANESE	10	ug/L			8.1	B	0.64	B
MERCURY	0.2	ug/L			<0.2		<0.2	
MOLYBDENUM	10	ug/L			1.6	B	1.3	B
NICKEL	20	ug/L			1.3	B	1.5	B
POTASSIUM	2000	ug/L			976		1130	
SELENIUM	3	ug/L			<3.0		3.6	
SILVER	10	ug/L			<10.0		<10.0	
SODIUM	2000	ug/L			43900		47700	
THALLIUM	10	ug/L			<0.08	B Uo	<10.0	
VANADIUM	10	ug/L			8.1	B	8.3	B
ZINC	20	ug/L			13.6	B	13.2	B

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APPENDIX B
GENERAL CHEMICALS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-001	UCD1-004	UCD1-010	UCD1-011	UCD1-012	UCD1-013	UCD1-018	UCD1-019	UCD1-020	UCD1-020
Sample ID			GWGW0608	GWGW0601	GWGW0624	GWGW0616	GWGW0606	GWGW0605	GWGW0617	GWGW0609	GWGW0612	GWGW0614
Date			02/19/98	02/17/98	03/02/98	02/24/98	02/18/98	02/18/98	02/24/98	02/19/98	02/23/98	02/23/98
QA												DUPLICATE
Analyte	CRDL	Units										
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	--	--	--	--
CHLORIDES	1	mg/L	--	--	--	--	--	--	--	--	--	--
NITROGEN, NITRATE	0.1	mg/L	12	1.34	37.2	22.7	64.4	13.6	9.45	19.8	10.7	10.8
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L	--	--	--	--	--	--	--	--	--	--
SULFATE AS SO ₄	1	mg/L	--	--	--	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS	20	mg/L	--	410	1470	835	1500	1090	561	1030	426	415
TOTAL ORGANIC CARBON	1	mg/L	--	1.03	3.75	<0.367 J Up	1.49	85.9	<1.06 Up	0.603	<1.41 Up	<0.872 Up

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**APPENDIX B
GENERAL CHEMICALS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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DAVIS, CALIFORNIA**

			Location	UCD1-021	UCD1-022	UCD1-023	UCD1-024	UCD1-025	UCD1-027Z3	UCD1-028	UCD1-034	UCD2-007	UCD2-014
			Sample ID	GWGW0613	GWGW0610	GWGW0603	GWGW0615	GWGW0635	GWGW0619	GWGW0628	GWGW0621	GWGW0611	GWGW0604
			Date	02/23/98	02/19/98	02/17/98	02/23/98	03/04/98	02/25/98	03/03/98	03/02/98	02/23/98	02/18/98
			QA										
Analyte	CRDL	Units											
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	--	286	--	--	--
CHLORIDES	1	mg/L	--	--	--	--	--	--	--	49.1	--	--	--
NITROGEN, NITRATE	0.1	mg/L	64.0	--	1.34	99.8	14.5	0.459	47.4	0.926	5.43	4.4	
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L	--	--	--	--	--	--	0.03	J	--	--	--
SULFATE AS SO ₄	1	mg/L	--	--	--	--	--	--	37.5	--	--	--	--
TOTAL DISSOLVED SOLIDS	20	mg/L	1090	866	534	1090	854	--	1050	Jc	390	482	666 Jc
TOTAL ORGANIC CARBON	1	mg/L	<0.536 Up	0.312 J	0.33 J	<1.22 Up	0.66	--	<0.58 Uo	<1.39 Uo	<0.743 Up	0.978	

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			Location	UCD2-015	UCD2-016	UCD2-017	UCD2-026	UCD2-027Z5	UCD2-029	UCD2-030	UCD2-030	UCD2-031	UCD2-032
			Sample ID	GWGW0602	GWGW0607	GWGW0618	GWGW0636	GWGW0620	GWGW0629	GWGW0630	GWGW0631	GWGW0634	GWGW0626
			Date	02/17/98	02/19/98	02/24/98	03/04/98	02/25/98	03/03/98	03/03/98	03/03/98	03/04/98	03/03/98
			QA								DUPLICATE		
Analyte	CRDL	Units											
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	342	352	352	340	380
CHLORIDES	1	mg/L	--	--	--	--	--	--	28.1	28.6	29.3	24.4	28.6
NITROGEN, NITRATE	0.1	mg/L	1.77	5.41	Jq	2	4.67	3.59	3.49	3.61	3.56	3.4	5.04
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L	--	--	--	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05
SULFATE AS SO ₄	1	mg/L	--	--	--	--	--	--	41.7	41.1	41.5	40	44.6
TOTAL DISSOLVED SOLIDS	20	mg/L	417	Jc	509	Jc	480	Jc	472	Jc	477	Jc	495
TOTAL ORGANIC CARBON	1	mg/L	0.784	1.47	<1.28	Up	1.1	--	<0.97	Uo	<1.08	Uo	<0.79

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GENERAL CHEMICALS
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			Location	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043
			Sample ID	GWGW0622	GWGW0625	GWGW0637	GWGW0623	GWGW0638	GWGW0633	GWGW0632	GWGW0639	GWGW0627
			Date	03/02/98	03/02/98	03/05/98	03/02/98	03/05/98	03/04/98	03/04/98	03/05/98	03/03/98
Analyte	CRDL	QA Units										
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--		334 Jh	322	325 Jh	324	335	334	350	356
CHLORIDES	1	mg/L	--		19.6	21.1	20.2	23.3 Jm	32.5	20.9	26.6	20.7
NITROGEN, NITRATE	0.1	mg/L	1.04		3.6	1.58	1.52	1.28	6.85	4.48	7.02	4.5
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L	--		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SULFATE AS SO ₄	1	mg/L	--		37.8	39.3	38.2	38.4	43.9	36.5	43.4	37.2
TOTAL DISSOLVED SOLIDS	20	mg/L	432 Jc		451 Jc	418 Jc	420 Jc	434 Jc	527 Jc	452 Jc	507 Jc	470 Jc
TOTAL ORGANIC CARBON	1	mg/L	<0.65 Uo		<1.34 Uo	1.42	<1.4 Uo	1.82	0.66	0.83	1.59	<0.59 Uo

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APPENDIX B
GENERAL CHEMICALS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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Location			UCD1-004	UCD1-010	UCD1-010	UCD1-012	UCD1-013	UCD1-023	UCD1-024	UCD1-025	UCD1-028
Sample ID			GWGW0640	GWGW0645	GWGW0646	GWGW0641	GWGW0642	GWGW0656	GWGW0649	GWGW0647	GWGW0660
Date			05/26/98	05/27/98	05/27/98	05/26/98	05/26/98	06/04/98	05/27/98	05/27/98	06/03/98
QA					DUPLICATE						
Analyte	CRDL	Units									
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	--	--	679
CHLORIDE	1	mg/L	--	--	--	--	--	--	--	--	45.1
NITROGEN, NITRATE	0.1	mg/L	2.19	36	36.4	54.1 Jh	--	1.56	94.6	15.9	39.6
PHOSPHOROUS, AS PO ₄	1	mg/L	--	--	--	--	--	--	--	--	0.11 Jl
SULFATE AS SO ₄	1	mg/L	--	--	--	--	--	--	--	--	39.3
TOTAL DISSOLVED SOLIDS	20	mg/L	456 Jc	1450 Jc	1450 Jc	1380 Jc	1060 Jc	--	--	--	1040 Jc
TOTAL ORGANIC CARBON	1	mg/L	1.65	4.13	4.3	3.04	4.04	--	--	--	1.77

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GENERAL CHEMICALS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD2-014	UCD2-015	UCD2-016	UCD2-026	UCD2-029	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036
Sample ID			GWGW0643	GWGW0644	GWGW0650	GWGW0648	GWGW0661	GWGW0652	GWGW0653	GWGW0657	GWGW0663	GWGW0662
Date			05/26/98	05/26/98	05/28/98	05/27/98	06/03/98	06/01/98	06/01/98	06/02/98	06/03/98	06/04/98
QA												
Analyte	CRDL	Units										
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	358	345	334	358	--	345
CHLORIDE	1	mg/L	--	--	--	--	25.1	25	23.2	21.4	--	20.2
NITROGEN, NITRATE	0.1	mg/L	6.33	2.04	--	5.69	4.48	2.63	3.36	5.39	<0.05	3.24
PHOSPHOROUS, AS PO ₄	1	mg/L	--	--	--	--	1.02	J 1.51	J 0.07	J 1.52	--	0.09
SULFATE AS SO ₄	1	mg/L	--	--	--	--	38.9	37.4	37.3	39.3	--	36.5
TOTAL DISSOLVED SOLIDS	20	mg/L	836	Jc 430	Jc 566	Jc 492	Jc 475	Jc 462	Jc 448	Jc 491	Jc 422	Jc 463
TOTAL ORGANIC CARBON	1	mg/L	2.91	1.53	1.4	1.06	1.54	1.98	1.65	1.3	1.51	1.74

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GENERAL CHEMICALS
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Location			UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043
Sample ID			GWGW0664	GWGW0665	GWGW0658	GWGW0654	GWGW0651	GWGW0655	GWGW0659
Date			06/04/98	06/03/98	06/03/98	06/01/98	06/01/98	06/02/98	06/02/98
QA									
Analyte	CRDL	Units							
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	324	345	339	386	345	355	360
CHLORIDE	1	mg/L	20	19.4	24.2	31.4	24	24.3	21.3
NITROGEN, NITRATE	0.1	mg/L	1.82	1.84	1.83	10.5	4.93	4.13	5.31
PHOSPHOROUS, AS PO ₄	1	mg/L	0.97 Jl	0.11 Jl	0.08 Jl	0.06 Jl	0.12 Jl	1.02 Jl	0.86 Jl
SULFATE AS SO ₄	1	mg/L	34.9	35.5	36.2	42.6	37.4	39.2	38.4
TOTAL DISSOLVED SOLIDS	20	mg/L	422 Jc	436 Jc	447 Jc	550 Jc	477 Jc	462 Jc	465 Jc
TOTAL ORGANIC CARBON	1	mg/L	1.71	1.61	1.44	1.67	1.99	1.4	1.22

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GENERAL CHEMICALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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			Location Sample ID Date QA	UCD1-010 GWGW0721 08/27/98	UCD1-011 GWGW0722 09/02/98	UCD1-012 GWGW0701 08/26/98	UCD1-013 GWGW0694 08/26/98	UCD1-013 GWGW0695 08/26/98 DUPLICATE	UCD1-018 GWGW0689 08/24/98	UCD1-021 GWGW0703 08/26/98	UCD1-022 GWGW0690 08/24/98
Analyte	CRDL	Units									
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	--	--	--
CHLORIDE	1	mg/L	26.2	--	--	--	--	--	--	--	--
NITROGEN, NITRATE	0.1	mg/L	34.8	18.6	65.4	--	--	--	21.6	61.6	--
PHOSPHORUS, DISSOLVED	1	mg/L	0.34	--	--	--	--	--	--	--	--
SULFATE AS SO ₄	1	mg/L	295	--	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS	20	mg/L	1510	--	1460	1070	1060	673	--	--	894
TOTAL ORGANIC CARBON	1	mg/L	6.6	--	13.3	22.5	14	4.6	--	--	8.76

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APPENDIX B
GENERAL CHEMICALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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Location			UCD1-023	UCD1-024	UCD1-025	UCD1-028	UCD1-034	UCD2-007	UCD2-014	UCD2-016
Sample ID			GWGW0711	GWGW0691	GWGW0709	GWGW0712	GWGW0716	GWGW0704	GWGW0696	GWGW0688
Date			08/24/98	08/27/98	08/27/98	09/01/98	08/31/98	08/26/98	08/26/98	08/24/98
QA										
Analyte	CRDL	Units								
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	335	--	--	--	--
CHLORIDE	1	mg/L	--	--	--	48.6	--	--	--	--
NITROGEN, NITRATE	0.1	mg/L	1.84	73.1	17.4	41.1	0.269	10.8	7.31	6.45
PHOSPHORUS, DISSOLVED	1	mg/L	--	--	--	0.37	--	--	--	--
SULFATE AS SO ₄	1	mg/L	--	--	--	39.5	--	--	--	--
TOTAL DISSOLVED SOLIDS	20	mg/L	--	--	--	988	--	591	868	543
TOTAL ORGANIC CARBON	1	mg/L	--	--	--	2.9	--	6.38	11.8	5.08

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GENERAL CHEMICALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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			Location	UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036
			Sample ID	GWGW0692	GWGW0710	GWGW0713	GWGW0714	GWGW0715	GWGW0698	GWGW0706	GWGW0718
			Date	08/24/98	08/27/98	09/01/98	09/01/98	09/01/98	08/25/98	09/02/98	09/02/98
			QA								
Analyte	CRDL	Units									
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	369	328	322	402	324	386	
CHLORIDE	1	mg/L	--	--	28.8	24.2	21.5	22.7	21.3	22.9	
NITROGEN, NITRATE	0.1	mg/L	1.86	4.51	9.9	3.45	3.72	9.5	1.75	6.72	
PHOSPHORUS, DISSOLVED	1	mg/L	--	--	0.07	0.55	0.08	0.26	0.05	0.61	
SULFATE AS SO ₄	1	mg/L	--	--	44.7	39	37.2	45.2	35.8	41.2	
TOTAL DISSOLVED SOLIDS	20	mg/L	417	467	527	452	447	576	526	498	
TOTAL ORGANIC CARBON	1	mg/L	6.16	4.07	1.47	1.9	1.63	9.64	2.18	2.02	

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GENERAL CHEMICALS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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			Location	UCD2-037	UCD2-038	UCD2-039	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043
			Sample ID	GWGW0719	GWGW0720	GWGW0705	GWGW0717	GWGW0707	GWGW0708	GWGW0699	GWGW0700
			Date	09/01/98	09/02/98	09/02/98	09/02/98	09/01/98	08/27/98	08/25/98	08/25/98
			QA				DUPLICATE				
Analyte	CRDL	Units									
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		314	312	357	348	361	355	358	355
CHLORIDE	1	mg/L		17.9	24.6	28	27.6	24.9	22.5	21.6	21.7
NITROGEN, NITRATE	0.1	mg/L		2.18	4.34	5.27	5.24	7.13	5.2	5.37	4.91
PHOSPHORUS, DISSOLVED	1	mg/L		0.32	0.49	0.37	0.06	0.42	0.09	0.23	0.3
SULFATE AS SO ₄	1	mg/L		35.4	37.9	44.8	44.8	40.7	38.3	38.9	37.7
TOTAL DISSOLVED SOLIDS	20	mg/L		408	439	497	486	492	477	491	494
TOTAL ORGANIC CARBON	1	mg/L		1.59	3.17	<0.668	<0.881	0.95	1.43	4.71	4.08

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APPENDIX B
GENERAL CHEMICALS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

			Location Sample ID	UCD1-011 GWGW0756	UCD1-010 GWGW0756	UCD1-012 GWGW0757	UCD1-013 GWGW0757	UCD1-018 GWGW0758	UCD1-025 GWGW0745	UCD1-028 GWGW0734	UCD1-028 GWGW0735
			Date QA	11/09/98	11/09/98	11/09/98	11/09/98	11/09/98	11/04/98	11/02/98	11/02/98 DUPLICATE
Analyte	CRDL	Units									
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	--	--	--	--	--	--	--	669	657
CHLORIDES	1	mg/L	--	--	--	--	--	--	--	48.6 Jf	23.5 Jf
NITROGEN, NITRATE	0.1	mg/L	5.85	40.9	68.4	--	--	--	19.2	45	44.6
PHOSPHORUS AS PO ₄	1	mg/L	--	--	--	--	--	--	--	0.12 J	0.13 J
SULFATE AS SO ₄	1	mg/L	--	--	--	--	--	--	--	40.3	40.4
TOTAL DISSOLVED SOLIDS	20	mg/L	470	1490	1450	1030	552	--	--	1020	1010
TOTAL ORGANIC CARBON	1	mg/L	6.66	12.1	12.3	10.7	5.22	--	--	4.34 Jf	9.31 Jf

QA =Samples taken as part of the quality assurance program.
 -- =Not Analyzed.
 < =Below detection limit.

**APPENDIX B
GENERAL CHEMICALS
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			Location Sample ID	UCD2-007 GWGW0752	UCD2-007 GWGW0753	UCD2-014 GWGW0754	UCD2-015 GWGW0755	UCD2-016 GWGW0747	UCD2-017 GWGW0748	UCD2-026 GWGW0746	UCD2-029 GWGW0736	UCD2-030 GWGW0737
			Date	11/05/98	11/05/98	11/05/98	11/05/98	11/04/98	11/04/98	11/04/98	11/02/98	11/02/98
			QA		DUPLICATE							
Analyte	CRDL	Units										
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		--	--	--	--	--	--	--	355	346
CHLORIDES	1	mg/L		--	--	--	--	--	--	--	30.1	27
NITROGEN, NITRATE	0.1	mg/L		10.1	9.92	6.0	6.32	5.55	1.83	4.57	9.85	5.34
PHOSPHORUS AS PO ₄	1	mg/L		--	--	--	--	--	--	--	0.1	0.09
SULFATE AS SO ₄	1	mg/L		--	--	--	--	--	--	--	43.3	41
TOTAL DISSOLVED SOLIDS	20	mg/L		537	555	598	450	469	407	438	500	461
TOTAL ORGANIC CARBON	1	mg/L		4.25	6.57	5.16	5.35	4.02	3.71	5.46	3.84	3.76

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			Location	UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041
			Sample ID	GWGW0738	GWGW0740	GWGW0741	GWGW0742	GWGW0749	GWGW0743	GWGW0744	GWGW0739	GWGW0759
			Date	11/02/98	11/03/98	11/03/98	11/03/98	11/04/98	11/03/98	11/03/98	11/02/98	11/09/98
			QA									
Analyte	CRDL	Units										
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		342	370	--	383	327	348	359	402	348
CHLORIDES	1	mg/L		24	22.4	--	20.2	18.3	24.6	27.4	25.8	22.4
NITROGEN, NITRATE	0.1	mg/L		4.57	7.83	3.04	4.89	2.27	4.88	6.57	6.11	4.99
PHOSPHORUS AS PO ₄	1	mg/L		0.09	0.11	--	0.19	0.1	0.12	0.11	0.09	0.22
SULFATE AS SO ₄	1	mg/L		37.6	44.6	--	39.3	35.9	39.4	42.4	40.5	37.7
TOTAL DISSOLVED SOLIDS	20	mg/L		451	502	417	464	399	423	467	467	458
TOTAL ORGANIC CARBON	1	mg/L		3.98	2.16	4.83	4.28	2.99	1.7	3.28	4.46	3.53

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			Location	UCD4-042	UCD4-043
			Sample ID	GWGW0760	GWGW0761
			Date	11/10/98	11/10/98
			QA		
Analyte	CRDL	Units			
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		346	342
CHLORIDES	1	mg/L		21.7	21.5
NITROGEN, NITRATE	0.1	mg/L		5.21	5.04
PHOSPHORUS AS PO ₄	1	mg/L		0.1 J	0.09 J
SULFATE AS SO ₄	1	mg/L		39.3	37.9
TOTAL DISSOLVED SOLIDS	20	mg/L		466	472
TOTAL ORGANIC CARBON	1	mg/L		4.54	3.45

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WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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Location			UCD1-004	UCD1-010	UCD1-011	UCD1-012	UCD1-013	UCD1-018	UCD1-019	UCD1-020	UCD1-020
Sample ID			GWGW0601	GWGW0624	GWGW0616	GWGW0606	GWGW0605	GWGW0617	GWGW0609	GWGW0612	GWGW0614
Date			02/17/98	03/02/98	02/24/98	02/18/98	02/18/98	02/24/98	02/19/98	02/23/98	02/23/98
QA											DUPLICATE
Analyte	CRDL	Units									
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,1-DICHLOROETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,1-DICHLOROETHENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5	UJc	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,2-DIBROMOETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,2-DICHLOROETHANE	1.0	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,3-DICHLOROBENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
2-BUTANONE	1.0	ug/L	<1	UJl	<1.0	Rc	<1	Rc	<1	Rc	<1
2-HEXANONE	1.0	ug/L	<1	UJl	<1.0	UJh	<1	UJh	<1	UJh	<1
4-METHYL-2-PENTANONE	1.0	ug/L	<1	UJl	<1.0	UJh	<1	UJh	<1	UJh	<1
ACETONE	5.0	ug/L	<1	B UJcz	<1.0	Rc	<1	Rc	<1	UJc	<1
BENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
BROMOCHLOROMETHANE	1.0	ug/L	<1	UJl	<1.0	<1	UJh	<1	UJh	<1	<1
BROMODICHLOROMETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
BROMOFORM	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
BROMOMETHANE	1.0	ug/L	0.84	J Jl	<1.0	<1	UJh	<1	UJh	<1	<1
CARBON DISULFIDE	1.0	ug/L	<1	UJl	<1.0	<1	UJh	<1	UJh	<1	<1
CARBON TETRACHLORIDE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CHLOROBENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CHLOROETHANE	0.50	ug/L	<0.5	Rc	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CHLOROFORM	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CHLOROMETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
DICHLOROBROMOMETHANE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
ETHYLBENZENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
METHYLENE CHLORIDE	0.50	ug/L	<1	B UJcz	<1.0	UJc	<1	UJh	<1	UJh	<1
STYRENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
TETRACHLOROETHENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
TOLUENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
TRICHLOROETHENE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
VINYL CHLORIDE	0.50	ug/L	<0.5	UJl	<0.50	<0.5	UJh	<0.5	UJh	<0.5	<0.5
XYLENES (TOTAL)	1.0	ug/L	<1	UJl	<1.0	<1	UJh	<1	UJh	<1	<1

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-021 GWGW0613 02/23/98	UCD1-023 GWGW0603 02/17/98	UCD1-024 GWGW0615 02/23/98	UCD1-025 GWGW0635 03/04/98	UCD1-027Z3 GWGW0619 02/25/98	UCD1-028 GWGW0628 03/03/98	UCD1-034 GWGW0621 03/02/98	UCD2-007 GWGW0611 02/23/98
Analyte	CRDL	Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,1-DICHLOROETHANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,1-DICHLOROETHENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5	<0.5 UJc	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,2-DIBROMOETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,2-DICHLOROETHANE	1.0	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50 UJc	<0.50 UJc	<0.5
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,3-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
2-BUTANONE	1.0	ug/L	<1 Rc	<1	<1 Rc	<1.0 Rc	<1 Rc	<1.0 Rc	<1.0 Rc	<1 Rc
2-HEXANONE	1.0	ug/L	<1 UJ	<1	<1 UJ	<1.0	<1	<1.0 UJc	<1.0 UJc	<1 UJ
4-METHYL-2-PENTANONE	1.0	ug/L	<1 UJ	<1	<1 UJ	<1.0	<1 UJ	<1.0 Rc	<1.0 Rc	<1 UJ
ACETONE	5.0	ug/L	<1 UJc	<1 Rc	<1 UJc	<1.0	<1 BJ UJz	<1.0 Rc	<1.0 Rc	<1 UJcy
BENZENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
BROMOCHLOROMETHANE	1.0	ug/L	<1	<1 UJ	<1	<1.0	<1	<1.0	<1.0	<1
BROMODICHLOROMETHANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
BROMOFORM	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
BROMOMETHANE	1.0	ug/L	<1	<1	<1	<1.0	<1	<1.0	<1.0	<1 BJ UJcz
CARBON DISULFIDE	1.0	ug/L	<1	<1	<1	<1.0	<1	<1.0 UJc	<1.0 UJc	<1
CARBON TETRACHLORIDE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50 Rc	<0.50	<0.5
CHLOROBENZENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
CHLOROETHANE	0.50	ug/L	<0.5	<0.5 Rc	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
CHLOROFORM	0.50	ug/L	0.89	0.35 J J	<0.5	1.4	<0.5	0.9	<0.50	<0.5
CHLOROMETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
DICHLOROBROMOMETHANE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
ETHYLBENZENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
METHYLENE CHLORIDE	0.50	ug/L	<1 JB Uz	<1 BJ UJcz	<1 JB Uz	<1.0 BJ UJcz	<1 BJ UJcz	<1.0 UJc	<1.0 UJc	<1
STYRENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
TETRACHLOROETHENE	0.50	ug/L	<0.5	<0.5 UJ	0.5	<0.50	<0.5	<0.50	<0.50	<0.5
TOLUENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.5 UJ	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
TRICHLOROETHENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
VINYL CHLORIDE	0.50	ug/L	<0.5	<0.5	<0.5	<0.50	<0.5	<0.50	<0.50	<0.5
XYLENES (TOTAL)	1.0	ug/L	<1	<1 UJ	<1	<1.0	<1	<1.0	<1.0	<1

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not detected.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-014	UCD2-015	UCD2-016	UCD2-017	UCD2-026	UCD2-027Z5	UCD2-029	UCD2-030
Sample ID			GWGW0604	GWGW0602	GWGW0607	GWGW0618	GWGW0636	GWGW0620	GWGW0629	GWGW0630
Date			02/18/98	02/17/98	02/19/98	02/24/98	03/04/98	02/25/98	03/03/98	03/03/98
QA										
Analyte	CRDL	Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.5	UJ	<0.5	UJ	<0.5	R	<0.5	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5		<0.5	UJ	<0.5		<0.5	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.5		<0.5	UJ	<0.5		<0.5	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.5	UJ	<0.5	UJ	<0.5		<0.5	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5	UJ	<0.5	UJc	<0.5	R	<0.5	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.5		<0.5		<0.5	UJ	<0.5	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	3.8	B J	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.5		<0.5	UJ	<0.5	B Uz	1.0	0.66
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5		<0.5	UJ	<0.5		<0.5	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5		<0.5	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5	UJm	<0.5	UJ	<0.5		<0.5	<0.50
2-BUTANONE	1.0	ug/L	<1	Rc	<1		Rc	<1	Rc	<1.0
2-HEXANONE	1.0	ug/L	<1	UJc	<1	UJ	<1	<1.0	Rc	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1	UJc	<1	UJ	<1	UJ	UJ	<1.0
ACETONE	5.0	ug/L	<1	B UJcz	<1	Rc	<1	UJcy	UJ	<1.0
BENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1		<1	UJ	<1	<1.0	<1	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
BROMOFORM	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
BROMOMETHANE	1.0	ug/L	<1		<1		J UJcy	<1	J Uy	<1.0
CARBON DISULFIDE	1.0	ug/L	<1	UJ	<1		<1	<1.0	<1	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
CHLOROBENZENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	0.49	J	<0.50
CHLOROETHANE	0.50	ug/L	<0.5	UJ	<0.5	Rc	<0.5	<0.50	<0.5	<0.50
CHLOROFORM	0.50	ug/L	<0.5	UJly	<0.5		<0.5	68.5	45.3	46.3
CHLOROMETHANE	0.50	ug/L	<0.5		<0.5		<0.5	JB Uz	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
DICHLOROBROMOMETHANE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
ETHYLBENZENE	0.50	ug/L	<0.5		<0.5		<0.5	<0.50	<0.5	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<1	B UJcz	<1	B UJcz	<1	B UJcz	<1	B UJcz
STYRENE	0.50	ug/L	<0.5		<0.5		<0.5	<0.50	<0.5	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
TOLUENE	0.50	ug/L	<0.5	UJm	<0.5		<0.5	<0.50	<0.5	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5		<0.5	UJ	<0.5	<0.50	<0.5	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5	<0.50	<0.5	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.5		<0.5		<0.5	<0.50	<0.5	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1		<1	UJ	<1	<1.0	<1	<1.0

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040
	Sample ID		GWGW0631	GWGW0634	GWGW0626	GWGW0622	GWGW0625	GWGW0637	GWGW0623	GWGW0638	GWGW0633
	Date		03/03/98	03/04/98	03/03/98	03/02/98	03/02/98	03/05/98	03/02/98	03/05/98	03/04/98
	QA		DUPLICATE								
	CRDL	Units									
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	0.41 J	<0.50	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	0.35 J	<0.50	0.29 J	<0.50	<0.50	<0.50	<0.50	<0.50	0.68
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50 UJc	0.51	<0.50 UJc	<0.50	<0.50 UJc	<0.50	<0.50	<0.50	1.4
1,2-DICHLOROPROPANE	0.50	ug/L	0.37 J	<0.50	0.52	<0.50	<0.50	<0.50	<0.50	<0.50	0.88
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc
2-HEXANONE	1.0	ug/L	<1.0 UJc	<1.0	<1.0 UJc	<1.0 UJc	<1.0 UJc	<1.0	<1.0 UJc	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0 Rc	<1.0	<1.0 Rc	<1.0 UJc	<1.0 Rc	<1.0	<1.0 UJc	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0 Rc	<1.0	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0	<1.0 Rc	<1.0	<1.0
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0 UJc	<1.0	<1.0 UJc	<1.0	<1.0 UJc	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50 Rc	<0.50	<0.50 Rc	<0.50	<0.50 Rc	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	34.6	41.0	37.1	<0.50	<0.50	<0.50	<0.50	0.63	74.5
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DICHLOROBROMOMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<1.0 UJc	<1.0 J UJzl	<1.0 UJc	<1.0 UJc	<1.0 UJc	<1.0 B UJc	<1.0 UJc	<1.0 B UJcz	<1.0 J UJzl
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = No red.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD4-041	UCD4-042	UCD4-043	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK
	Sample ID	Date	GWGW0632	GWGW0639	GWGW0627	TBGW0233	TBGW0235	TBGW0237	TBGW0238	TBGW0239
	CRDL	Units	03/04/98	03/05/98	03/03/98	02/17/98	02/18/98	02/19/98	02/23/98	02/24/98
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	0.74	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	0.64	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	1.1	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	0.82	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
2-HEXANONE	1.0	ug/L	<1.0	0.73	<1.0	<1	<1	<1	<1	<1
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1	19.6	29.3	25.9	22
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	1.6
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	0.50	ug/L	19.4	58.9	13.5	<0.5	<0.36	<0.5	<0.5	<0.5
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
DICHLOROBROMOMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	0.50	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK
	Sample ID	Date	TBGW0240	TBGW0242	TBGW0243	TBGW0244	TBGW0245
	CRDL	Units	02/25/98	03/02/98	03/03/98	03/04/98	03/05/98
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.5	<0.50 UJc	<0.50 UJc	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc
2-HEXANONE	1.0	ug/L	<1	<1.0 UJc	<1.0 UJc	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1 UJl	<1.0 Rc	<1.0 Rc	<1.0	<1.0
ACETONE	5.0	ug/L	<1 B UJzl	<1.0 Rc	<1.0 Rc	25.0 B	<1.0
BENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1	<1.0 UJc	<1.0 UJc	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.5	<0.50 Rc	<0.50 Rc	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
CHLOROMETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
DICHLOROBROMOMETHANE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<1 B UJcz	2.4 Jc	<1.0 UJc	<1.0 B UJcz	<1.0 B UJcz
STYRENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.5	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

— = Not detected.

3/26/99 PMGwat98q1.xls

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location		UCD1-004	UCD1-010	UCD1-010	UCD1-012	UCD1-013	UCD1-023	UCD1-024	UCD1-025
Sample ID		GWGW0640	GWGW0645	GWGW0646	GWGW0641	GWGW0642	GWGW0656	GWGW0649	GWGW0647
Date		05/26/98	05/27/98	05/27/98	05/26/98	05/26/98	06/04/98	05/27/98	05/27/98
QA				DUPLICATE					
Analyte	CRDL Units								
1,1,1-TRICHLOROETHANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0 ug/L	<0.50	<0.50	<0.50	1.0	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50 ug/L	<0.50	<0.50	<0.50	4.3	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50 ug/L	<0.50	<0.50	<0.50	9.9	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0 ug/L	<0.50	<0.50	<0.50	2.5	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50 ug/L	<0.50	<0.50	<0.50	0.27 J	0.17 J	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-HEXANONE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50 ug/L	<0.50	<0.50	<0.50	12.6	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50 ug/L	<0.50	<0.50	<0.50	4570 D	<0.61 UJ z	0.23 J	<0.50	<1.5 UJ z
CHLOROMETHANE	0.50 ug/L	<0.50	<0.50	<0.50	<0.5 UJcy	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50 ug/L	<0.50	<0.50	<0.50	0.044 J	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50 ug/L	<1.9 JB UJcz	<0.97 JB UJcz	<0.64 JB UJcz	<0.76 J UJcz	<1.2 JB UJcz	<1.0	<0.61 JB UJcz	<0.67 JB UJcz
STYRENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.35 J	<0.50
TOLUENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50 ug/L	<0.50	<0.50	<0.50	0.17 J	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50 ug/L	<0.50	<0.50	<0.50	0.1 J	0.099 J	<0.50	0.071 J	<0.50
VINYL CHLORIDE	0.50 ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.
-- = Not Analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-028 GWGW0660 06/03/98	UCD2-014 GWGW0643 05/26/98	UCD2-015 GWGW0644 05/26/98	UCD2-026 GWGW0648 05/27/98	UCD2-029 GWGW0661 06/03/98	UCD2-030 GWGW0652 06/01/98	UCD2-031 GWGW0653 06/01/98
Analyte	CRDL	Units							
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	0.16 J	0.74	0.28 J	0.21 J
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	0.72	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	0.22 J	1.4	0.47 J	0.36 J
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	0.25 J	<0.50	0.12 J	1.2	0.32 J	0.22 J
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0	UJc	<1.0	<1.0	<1.0	UJc	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	0.46 J	<0.54 UJiz	<0.27 J UJiz	43.0 J	67.3	15.2	45.9
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<0.7 JB UJcz	<1.2 B UJcz	<1.4 JB UJcz	<0.62 JB UJcz	<0.72 JB UJcz	<0.49 JB UJcz	<0.65 JB UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041
	Sample ID	Date	GWGW0657	GWGW0663	GWGW0662	GWGW0664	GWGW0665	GWGW0658	GWGW0654	GWGW0651
		QA	06/02/98	06/03/98	06/04/98	06/04/98	06/03/98	06/03/98	06/01/98	06/01/98
CRDL	Units									
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	0.12 J	<0.50	<0.50	<0.50	<0.50	<0.50	0.98	0.32 J
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.91	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	0.5
1,2-DICHLOROPROPANE	0.50	ug/L	0.14 J	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	0.36 J
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0 J Jc	<1.0	<1.0	<1.0	<1.0	<1.0 J Jc	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	14.5	<0.50	<0.50	<0.50	<0.50	1.0	113 D	33.3
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<0.77 JB UJcz	<1.0	<1.0	<1.0	<1.0	<1.2 BJ UJcz	<0.79 JB UJcz	<0.74 JB UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.
-- = Not Analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD4-042	UCD4-043	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK
Sample ID			GWGW0655	GWGW0659	TBGW0246	TBGW0247	TBGW0249	TBGW0250	TBGW0251	TBGW0252
Date			06/02/98	06/02/98	05/26/98	05/27/98	06/02/98	06/01/98	06/03/98	06/04/98
QA					TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Analyte	CRDL	Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	0.29 J	0.31 J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	0.48 J	0.43 J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	0.34 J	0.32 J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0	<1.0	1.3 J Jc	<1.2 JB UJcz	2.2 J Jc	2.2 J Jc	1.4 J Jc	1.3 J Jc
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0 UJc	<1.0 UJc	<1.0	<1.0	<1.0	<1.0	<1.0 UJc	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	33.1	35.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	0.17 J Jc	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<0.54 JB UJcz	<0.64 JB UJcz	<4.7 JB UJcz	<5.8 JB UJcz	<6.2 B Uz	<6.8 B Uz	<5.2 BJ UJcz	<5.5 B Uz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-010	UCD1-012	UCD1-013	UCD1-013	UCD1-021	UCD1-023	UCD1-024		
Sample ID			GWGW0721	GWGW0701	GWGW0694	GWGW0695	GWGW0703	GWGW0711	GWGW0691		
Date			08/27/98	08/26/98	08/26/98	08/26/98	08/26/98	08/24/98	08/27/98		
QA						DUPLICATE					
Analyte	CRDL	Units									
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	2.8	<0.50	<0.50	<0.50	<0.50	<0.50		
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	10.7	<0.50	<0.50	<0.50	<0.50	<0.50		
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	13.7	<0.50	<0.50	<0.50	<0.50	<0.50		
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	4.4	<0.50	<0.50	<0.50	<0.50	<0.50		
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	0.41	J	<0.50	<0.50	<0.50	<0.50		
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
2-BUTANONE	1.0	ug/L	<1.0	Rc	Rc	<1.0	Rc	<1.0	Rc		
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	0.61	<0.50	<0.50	<0.50	<0.50	<0.50		
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
BROMOMETHANE	1.0	ug/L	<1.0	1.3	Jc	<1.0	<1.0	<1.0	<1.0		
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CHLOROFORM	0.50	ug/L	<0.50	6870	<0.33	J Uy	<0.54	Uy	<0.50		
CHLOROMETHANE	0.50	ug/L	<0.50	UJl	1.4	<0.50	<0.50	<0.50	<0.50	UJl	
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
METHYLENE CHLORIDE	0.50	ug/L	<1.1	B UJcz	<1.0	<1.0	<0.62	JB U	<1.0	<1.3	B UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.35	J
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	

QA = Samples taken as part of the quality assurance program.

< = Below detection limit.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-025 GWGW0709 08/27/98	UCD1-028 GWGW0712 09/01/98	UCD1-034 GWGW0716 08/31/98	UCD2-007 GWGW0704 08/26/98	UCD2-014 GWGW0696 08/26/98	UCD2-016 GWGW0688 08/24/98	UCD2-017 GWGW0692 08/24/98
Analyte	CRDL	Units							
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	J	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc
2-HEXANONE	1.0	ug/L	<1.0	<1.0 UJc	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<2.3 Uy	<0.50	<0.50	<0.50	<0.42 Uy	<0.50	<0.50
CHLOROMETHANE	0.50	ug/L	<0.50 UJl	<0.50	<0.50 UJl	<0.50	0.97	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<1.5 B UJcz	<1.0	<1.9 B UJcz	<1.0	<1.0	<1.0	<1.0
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	0.28 Jl	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

< = Below detection limit.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location	UCD2-026	UCD2-029	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037
		Sample ID	GWGW0710	GWGW0713	GWGW0714	GWGW0715	GWGW0698	GWGW0706	GWGW0718	GWGW0719
		Date	08/27/98	09/01/98	09/01/98	09/01/98	08/25/98	09/02/98	09/02/98	09/01/98
		QA								
Analyte	CRDL	Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	0.69	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	Rc	<1.0	Rc	<1.0	Rc	<1.0	Rc
2-HEXANONE	1.0	ug/L	<1.0	Rc	<1.0	UJc	<1.0	UJc	<1.0	UJc
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0		<1.0		<1.0		<1.0	
ACETONE	5.0	ug/L	<1.0		<1.0		<1.0		<1.0	
BENZENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
BROMOCHLOROMETHANE	1.0	ug/L	<1.0		<1.0		<1.0		<1.0	
BROMODICHLOROMETHANE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
BROMOFORM	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
BROMOMETHANE	1.0	ug/L	<1.0		<1.0		<1.0		<1.0	
CARBON DISULFIDE	1.0	ug/L	<1.0		<1.0		<1.0		<1.0	
CARBON TETRACHLORIDE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
CHLOROBENZENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
CHLOROETHANE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
CHLOROFORM	0.50	ug/L	8.5		234		7.5		3.8	
CHLOROMETHANE	0.50	ug/L	<0.50	UJl	<0.50		<0.50		<0.50	
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
ETHYLBENZENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
METHYLENE CHLORIDE	0.50	ug/L	<1.1	B UJcz	<0.28	JB Uz	<1.0		<1.0	
STYRENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
TETRACHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
TOLUENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
TRICHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
VINYL CHLORIDE	0.50	ug/L	<0.50		<0.50		<0.50		<0.50	
XYLENES (TOTAL)	1.0	ug/L	<1.0		<1.0		<1.0		<1.0	

QA = Samples taken as part of the quality assurance program.

< = Below detection limit.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-038	UCD2-039	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043	TRIPBLNK
Sample ID			GWGW0720	GWGW0705	GWGW0717	GWGW0707	GWGW0708	GWGW0699	GWGW0700	TBGW0259
Date			09/02/98	09/02/98	09/02/98	09/01/98	08/27/98	08/25/98	08/25/98	08/24/98
QA					DUPLICATE					
Analyte	CRDL	Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	0.36 J	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	0.6	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.35 J	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	0.43 J	<0.50	<0.50	0.24 J	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc	<1.0 Rc
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<0.50	3.8	3.8	73.2	24.1	11.2	20.6	0.35 J
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50 UJI	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<1.0	<1.0	<1.0	<1.8 B UJcz	<1.2 B UJcz	<1.0	<1.0	<1.0
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

< = Below detection limit.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Location	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK	TRIPBLNK
		Sample ID Date QA	TBGW0260 08/25/98	TBGW0261 08/26/98	TBGW0262 08/27/98	TBGW0263 08/31/98	TBGW0264 09/01/98	TBGW0265 09/02/98
Units								
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	Rc	<1.0	Rc	<1.0	Rc
2-HEXANONE	1.0	ug/L	<1.0	Rc	<1.0	Rc	<1.0	Rc
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	Rc	<1.0	Rc	<1.0	Rc
ACETONE	5.0	ug/L	<1.0	Rc	<1.0	Rc	<1.0	Rc
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	20.6	18.4
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<0.50	0.87	0.58	<0.50	<0.50	<0.50
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	UJl	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	4.2	<1.0	<1.9	B UJcz	<6.5	B UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	B UJcz	<0.50	B UJcz
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.

< = Below detection limit.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-004	UCD1-010	UCD1-012	UCD1-013	UCD1-025	UCD1-028			
Sample ID			GWGW0750	GWGW0756	GWGW0757	GWGW0751	GWGW0745	GWGW0734			
Date			11/05/98	11/09/98	11/09/98	11/05/98	11/04/98	11/02/98			
QA											
Analyte	CRDL	Units									
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,1,2-TRICHLOROETHANE	1.0	ug/L	<1.00	<1.00	2	<1.00	<1.00	<1.00			
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	9	<0.50	<0.50	<0.50			
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	12	<0.50	<0.50	<0.50			
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	UJc	<0.50			
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,2-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	4	<0.50	<0.50	<0.50			
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
2-BUTANONE	1.0	ug/L	<2.00	Rc	<2.00	Rc	<2.00	Rc	<2.00	UJc	
2-HEXANONE	1.0	ug/L	<2.00	UJc	<2.00	UJc	<2.00	UJc	<2.00	UJc	
4-METHYL-2-PENTANONE	1.0	ug/L	<2.00	UJc	<2.00	UJc	<2.00	UJc	<2.00	UJc	
ACETONE	5.0	ug/L	<5.00	Rc	<5.00	Rc	<5.00	Rc	<5.00	Rc	
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
BROMOCHLOROMETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	1	<0.50	<0.50	<0.50	<0.50		
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
BROMOMETHANE	1.0	ug/L	<1.00	<1.00	<1.00	Rc	<1.00	<1.00	<1.00		
CARBON DISULFIDE	1.0	ug/L	<1.00	UJc	<1.00	UJc	<1.00	UJc	<1.00	UJc	
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CHLOROETHANE	0.50	ug/L	<0.50	UJc	<0.50	UJc	<0.50	UJc	<0.50		
CHLOROFORM	0.50	ug/L	<0.50	<0.50	3400	D	0.6	2	0.5	J	
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	UJc	<0.50	UJc		
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
METHYLENE CHLORIDE	1.0	ug/L	<0.5	BJ Uz	<0.4	BJ Uz	<0.3	BJ Uz	<0.6	BJ Uz	
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
TOLUENE	0.50	ug/L	<0.2	J Uy	<0.50	<0.50	<0.50	<0.2	J Uy	0.2	J
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	0.3	J	<0.50	<0.50	UJc	<0.50	
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	<0.50	UJc	<0.50	<0.50	
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
XYLENES (TOTAL)	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	

-- = Not analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location	UCD1-028	UCD2-007	UCD2-007	UCD2-014	UCD2-015	UCD2-016
		Sample ID	GWGW0735	GWGW0752	GWGW0753	GWGW0754	GWGW0755	GWGW0747
		Date	11/02/98	11/05/98	11/05/98	11/05/98	11/05/98	11/04/98
		QA	DUPLICATE		DUPLICATE			
Analyte	CRDL	Units						
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	UJc	<0.50	UJc	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	UJc	<0.50	UJc	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<2.00	UJc	<2.00	Rc	<2.00	Rc
2-HEXANONE	1.0	ug/L	<2.00	UJc	<2.00	UJc	<2.00	UJc
4-METHYL-2-PENTANONE	1.0	ug/L	<2.00	UJc	<2.00	UJc	<2.00	UJc
ACETONE	5.0	ug/L	<5.00	Rc	<4	Rc	<5.00	Rc
BENZENE	0.50	ug/L	<0.50		<0.50	Rc	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.00		<1.00	Rc	<1.00	<1.00
BROMODICHLOROMETHANE	0.50	ug/L	<0.50		<0.50	Rc	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50		<0.50	Rc	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.00		<1.00	Rc	<1.00	<1.00
CARBON DISULFIDE	1.0	ug/L	<1.00	UJc	<1.00	UJc	<1.00	UJc
CARBON TETRACHLORIDE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	UJc
CHLOROFORM	0.50	ug/L	0.4	J	<0.50	2	<0.50	<0.50
CHLOROMETHANE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
METHYLENE CHLORIDE	1.0	ug/L	<2	B UJcz	<0.4	B UJcz	<0.5	B UJcz
STYRENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50		<0.50	UJc	<0.3	J Uy
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	UJc
TRICHLOROETHENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.00		<1.00	UJc	<1.00	<1.00

-- = Not analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-031	UCD2-032
Sample ID			GWGW0748	GWGW0746	GWGW0736	GWGW0737	GWGW0738	GWGW0740
Date			11/04/98	11/04/98	11/02/98	11/02/98	11/02/98	11/03/98
QA								
Analyte	CRDL	Units						
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	0.6	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	0.9	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	1	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	1	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<2.00	Rc	<2.00	UJc	<2.00	UJc
2-HEXANONE	1.0	ug/L	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
4-METHYL-2-PENTANONE	1.0	ug/L	<2.00	UJc	<2.00	<2.00	<2.00	<2.00
ACETONE	5.0	ug/L	<5.00	Rc	<5.00	Rc	<5.00	Rc
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
CARBON DISULFIDE	1.0	ug/L	<1.00	UJc	<1.00	UJc	<1.00	UJc
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<0.50	5	150	18	2	4
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	1.0	ug/L	<1	BJ UJcz	<1	BJ UJcz	<1	BJ UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.2	J Uy	<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	UJc	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00

-- = Not analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	
Sample ID			GWGW0741	GWGW0742	GWGW0749	GWGW0743	GWGW0744	
Date			11/03/98	11/03/98	11/04/98	11/03/98	11/03/98	
QA								
Analyte	CRDL	Units						
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2-TRICHLOROETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00	<1.00	
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	UJc	<0.50	
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,2-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	
2-BUTANONE	1.0	ug/L	<2.00	UJc	<2.00	UJc	<2.00	UJc
2-HEXANONE	1.0	ug/L	<2.00		<2.00	UJc	<2.00	
4-METHYL-2-PENTANONE	1.0	ug/L	<2.00		<2.00	UJc	<2.00	
ACETONE	5.0	ug/L	<5.00	Rc	<5.00	Rc	<5.00	Rc
BENZENE	0.50	ug/L	<0.50		<0.50		<0.50	
BROMOCHLOROMETHANE	1.0	ug/L	<1.00		<1.00		<1.00	
BROMODICHLOROMETHANE	0.50	ug/L	<0.50		<0.50		<0.50	
BROMOFORM	0.50	ug/L	<0.50		<0.50		<0.50	
BROMOMETHANE	1.0	ug/L	<1.00		<1.00		<1.00	
CARBON DISULFIDE	1.0	ug/L	<1.00	UJc	<1.00	UJc	<1.00	UJc
CARBON TETRACHLORIDE	0.50	ug/L	<0.50		<0.50		<0.50	
CHLOROBENZENE	0.50	ug/L	<0.50		<0.50		<0.50	
CHLOROETHANE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	
CHLOROFORM	0.50	ug/L	<0.50		<0.50	0.3	<0.50	2
CHLOROMETHANE	0.50	ug/L	<0.50		<0.50	J	<0.50	
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50		<0.50	
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50		<0.50		<0.50	
ETHYLBENZENE	0.50	ug/L	<0.50		<0.50		<0.50	
METHYLENE CHLORIDE	1.0	ug/L	<0.9	BJ UJcz	<0.8	BJ Uz	<0.8	BJ UJcz
STYRENE	0.50	ug/L	<0.50		<0.50		<0.50	
TETRACHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50	
TOLUENE	0.50	ug/L	<0.50		<0.50		0.2	J
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50	
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50		<0.50	UJc	<0.50	
TRICHLOROETHENE	0.50	ug/L	<0.50		<0.50		<0.50	
VINYL CHLORIDE	0.50	ug/L	<0.50		<0.50		<0.50	
XYLENES (TOTAL)	1.0	ug/L	<1.00		<1.00		<1.00	

-- = Not analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-040	UCD4-041	UCD4-042	UCD4-043
Sample ID			GWGW0739	GWGW0759	GWGW0760	GWGW0761
Date			11/02/98	11/09/98	11/10/98	11/10/98
QA						
Analyte	CRDL	Units				
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	0.6	0.3 J	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	0.50	ug/L	<0.50	0.3 J	<0.50	0.3 J
1,2-DICHLOROPROPANE	0.50	ug/L	0.5 J	0.2 J	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<2.00 UJc	<2.00	<2.00 UJc	<2.00 UJc
2-HEXANONE	1.0	ug/L	0.2 J	<2.00	<2.00 Rc	<2.00 Rc
4-METHYL-2-PENTANONE	1.0	ug/L	<2.00	<2.00	<2.00 UJc	<2.00 UJc
ACETONE	5.0	ug/L	<5.00 Rc	<2 BJ Rc	<5.00 Rc	<5.00 Rc
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.00	<1.00	<1.00	<1.00
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
BROMOFORM	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
BROMOMETHANE	1.0	ug/L	<1.00	<1.00	<1.00 Rc	<1.00 Rc
CARBON DISULFIDE	1.0	ug/L	<1.00 UJc	<1.00	<1.00 UJc	<1.00 UJc
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50 Rc	<0.50 Rc
CHLOROFORM	0.50	ug/L	51 D	20	11	21
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	1.0	ug/L	<0.9 BJ UJcz	0.4 J	<2 BJ UJcz	<0.7 BJ UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	<0.50	0.3 J	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.2 BJ Uz	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.00	<1.00	<1.00	<1.00

-- = Not analyzed.

DAVIS, CALIFORNIA

Analyte	Location		UCD1-004	UCD1-010	UCD1-012	UCD1-013	UCD1-018	UCD1-020
	Sample ID		GWGW0601	GWGW0624	GWGW0606	GWGW0605	GWGW0617	GWGW0612
	Date		02/17/98	03/02/98	02/18/98	02/18/98	02/24/98	02/23/98
	QA							
CRDL	Units							
1,2,4-TRICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
1,4-DICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2,4,6-TRICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2,4-DICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2,4-DIMETHYLPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2,4-DINITROPHENOL	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
2,4-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2,6-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2-CHLORONAPHTHALENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2-CHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2-METHYLNAPHTHALENE	10	ug/L	<10.0	UJc	<10.2	UJc	<10.4	UJc
2-METHYPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
2-NITROANILINE	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
2-NITROPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
3-NITROANILINE	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
4,6-DINITROPHENOL 2-METHYL	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
4-CHLOROANILINE	10	ug/L	<20.0	<20.0	<20.4	<20.2	<20.8	<20.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
4-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
4-NITROANILINE	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
4-NITROPHENOL	25	ug/L	<25.0	<25.0	<25.5	<25.2	<26.0	<25.0
ACENAPHTHENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
ACENAPHTHYLENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
ANTHRACENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BENZO(A)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BENZO(A)PYRENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BENZO(B)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BENZO(K)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L	<10.0	<10.0	<10.2	<10.1	<10.4	<10.0

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD1-020	UCD1-025	UCD1-028	UCD1-034	UCD2-014	UCD2-015
	Sample ID		GWGW0614	GWGW0635	GWGW0628	GWGW0621	GWGW0604	GWGW0602
	Date		02/23/98	03/04/98	03/03/98	03/02/98	02/18/98	02/17/98
	CRDL	Units	QA DUPLICATE					
1,2,4-TRICHLOROBENZENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
1,4-DICHLOROBENZENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2,4,6-TRICHLOROPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2,4-DICHLOROPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2,4-DIMETHYLPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2,4-DINITROPHENOL	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
2,4-DINITROTOLUENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2,6-DINITROTOLUENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2-CHLORONAPHTHALENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2-CHLOROPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2-METHYLNAPHTHALENE	10	ug/L	<10	UJc	UJc	UJc	UJc	UJc
2-METHYPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
2-NITROANILINE	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
2-NITROPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
3-NITROANILINE	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
4,6-DINITROPHENOL 2-METHYL	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
4-CHLOROANILINE	10	ug/L	<19.9	<20.0	<22.5	<20.0	<20.0	<20.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
4-METHYLPHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
4-NITROANILINE	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
4-NITROPHENOL	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
ACENAPHTHENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
ACENAPHTHYLENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
ANTHRACENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BENZO(A)ANTHRACENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BENZO(A)PYRENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BENZO(B)FLUORANTHENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BENZO(K)FLUORANTHENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
CHRYSENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DIBENZOFURAN	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DIETHYL PHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
DIMETHYL PHTHALATE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
FLUORANTHENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
FLUORENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
HEXACHLOROBENZENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
HEXACHLOROBUTADIENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
HEXACHLOROETHANE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
ISOPHORONE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
NAPHTHALENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
NITROBENZENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
PENTACHLOROPHENOL	25	ug/L	<24.9	<25.0	<28.1	<25.0	<25.0	<25.0
PHENANTHRENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
PHENOL	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0
PYRENE	10	ug/L	<10	<10.0	<11.2	<10.0	<10.0	<10.0

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-030	UCD2-031
Sample ID			GWGW0618	GWGW0636	GWGW0629	GWGW0630	GWGW0631	GWGW0634
Date			02/24/98	03/04/98	03/03/98	03/03/98	03/03/98	03/04/98
QA							DUPLICATE	
Analyte	CRDL	Units						
1,2,4-TRICHLOROBENZENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
1,4-DICHLOROBENZENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2,4,6-TRICHLOROPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2,4-DICHLOROPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2,4-DIMETHYLPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2,4-DINITROPHENOL	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
2,4-DINITROTOLUENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2,6-DINITROTOLUENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-CHLORONAPHTHALENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-CHLOROPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-METHYLNAPHTHALENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-METHYPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
2-NITROANILINE	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
2-NITROPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
3-NITROANILINE	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
4,6-DINITROPHENOL 2-METHYL	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
4-CHLOROANILINE	10	ug/L	<19.8	<19.8	<19.8	<20.0	<20.0	<20.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
4-METHYLPHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
4-NITROANILINE	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
NITROPHENOL	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
ENAPHTHENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
ACENAPHTHYLENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
ANTHRACENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BENZO(A)ANTHRACENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BENZO(A)PYRENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BENZO(B)FLUORANTHENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BENZO(K)FLUORANTHENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	88.3	<9.9	<9.9	<10.0	<10.0	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
CHRYSENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DIBENZOFURAN	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DIETHYL PHTHALATE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
DIMETHYL PHTHALATE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
FLUORANTHENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
FLUORENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
HEXACHLOROBENZENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
HEXACHLOROBUTADIENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
HEXACHLOROETHANE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
ISOPHORONE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
NAPHTHALENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
TROBENZENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
NTACHLOROPHENOL	25	ug/L	<24.8	<24.8	<24.8	<25.0	<25.0	<25.0
PHENANTHRENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
PHENOL	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0
PYRENE	10	ug/L	<9.9	<9.9	<9.9	<10.0	<10.0	<10.0

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039
			Sample ID Date QA	GWGW0626 03/03/98	GWGW0622 03/02/98	GWGW0625 03/02/98	GWGW0637 03/05/98	GWGW0623 03/02/98	GWGW0638 03/05/98
1,2,4-TRICHLOROBENZENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
1,4-DICHLOROBENZENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2,4,6-TRICHLOROPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2,4-DICHLOROPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2,4-DIMETHYLPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2,4-DINITROPHENOL	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
2,4-DINITROTOLUENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2,6-DINITROTOLUENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2-CHLORONAPHTHALENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2-CHLOROPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2-METHYLNAPHTHALENE	10	ug/L		<10.0	UJc	<10.2	UJc	<10.0	UJc
2-METHYPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
2-NITROANILINE	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
2-NITROPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
3-NITROANILINE	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
4,6-DINITROPHENOL 2-METHYL	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
4-CHLOROANILINE	10	ug/L		<20.0	<22.2	<20.4	<19.9	<20.0	<20.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
4-METHYLPHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
4-NITROANILINE	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
4-NITROPHENOL	25	ug/L		<25.0	<27.8	<25.5	<24.9	IRI	<25.0
ACENAPHTHENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
ACENAPHTHYLENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
ANTHRACENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BENZO(A)ANTHRACENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BENZO(A)PYRENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BENZO(B)FLUORANTHENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BENZO(K)FLUORANTHENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
CHRYSENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DIBENZOFURAN	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DIETHYL PHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
DIMETHYL PHTHALATE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
FLUORANTHENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
FLUORENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
HEXACHLOROBENZENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
HEXACHLOROBUTADIENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
HEXACHLOROETHANE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
ISOPHORONE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
NAPHTHALENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
NITROBENZENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
PENTACHLOROPHENOL	25	ug/L		<25.0	<27.8	<25.5	<24.9	<25.0	<25.0
PHENANTHRENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
PHENOL	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0
PYRENE	10	ug/L		<10.0	<11.1	<10.2	<10	<10.0	<10.0

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

			Location	UCD2-040	UCD4-041	UCD4-042	UCD4-043
			Sample ID	GWGW0633	GWGW0632	GWGW0639	GWGW0627
			Date	03/04/98	03/04/98	03/05/98	03/03/98
			QA				
Analyte	CRDL	Units					
1,2,4-TRICHLOROBENZENE	10	ug/L		<10.0	<10.0	<10	<10.0
1,4-DICHLOROBENZENE	10	ug/L		<10.0	<10.0	<10	<10.0
2,4,6-TRICHLOROPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
2,4-DICHLOROPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
2,4-DIMETHYLPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
2,4-DINITROPHENOL	25	ug/L		<25.0	<25.0	<24.9	<25.0
2,4-DINITROTOLUENE	10	ug/L		<10.0	<10.0	<10	<10.0
2,6-DINITROTOLUENE	10	ug/L		<10.0	<10.0	<10	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<10.0	<10.0	<10	<10.0
2-CHLORONAPHTHALENE	10	ug/L		<10.0	<10.0	<10	<10.0
2-CHLOROPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
2-METHYLNAPHTHALENE	10	ug/L		<10.0	<10.0	<10	<10.0
2-METHYPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
2-NITROANILINE	25	ug/L		<25.0	<25.0	<24.9	<25.0
2-NITROPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L		<10.0	<10.0	<10	<10.0
3-NITROANILINE	25	ug/L		<25.0	<25.0	<24.9	<25.0
4,6-DINITROPHENOL 2-METHYL	25	ug/L		<25.0	<25.0	<24.9	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<10.0	<10.0	<10	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
4-CHLOROANILINE	10	ug/L		<20.0	<20.0	<19.9	<20.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<10.0	<10.0	<10	<10.0
4-METHYLPHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
4-NITROANILINE	25	ug/L		<25.0	<25.0	<24.9	<25.0
4-NITROPHENOL	25	ug/L		<25.0	<25.0	<24.9	<25.0
ACENAPHTHENE	10	ug/L		<10.0	<10.0	<10	<10.0
ACENAPHTHYLENE	10	ug/L		<10.0	<10.0	<10	<10.0
ANTHRACENE	10	ug/L		<10.0	<10.0	<10	<10.0
BENZO(A)ANTHRACENE	10	ug/L		<10.0	<10.0	<10	<10.0
BENZO(A)PYRENE	10	ug/L		<10.0	<10.0	<10	<10.0
BENZO(B)FLUORANTHENE	10	ug/L		<10.0	<10.0	<10	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L		<10.0	<10.0	<10	<10.0
BENZO(K)FLUORANTHENE	10	ug/L		<10.0	<10.0	<10	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<10.0	<10.0	<10	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<10.0	<10.0	<10	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
CHRYSENE	10	ug/L		<10.0	<10.0	<10	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L		<10.0	<10.0	<10	<10.0
DIBENZOFURAN	10	ug/L		<10.0	<10.0	<10	<10.0
DIETHYL PHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
DIMETHYL PHTHALATE	10	ug/L		<10.0	<10.0	<10	<10.0
FLUORANTHENE	10	ug/L		<10.0	<10.0	<10	<10.0
FLUORENE	10	ug/L		<10.0	<10.0	<10	<10.0
HEXACHLOROBENZENE	10	ug/L		<10.0	<10.0	<10	<10.0
HEXACHLOROBUTADIENE	10	ug/L		<10.0	<10.0	<10	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<10.0	<10.0	<10	<10.0
HEXACHLOROETHANE	10	ug/L		<10.0	<10.0	<10	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<10.0	<10.0	<10	<10.0
ISOPHORONE	10	ug/L		<10.0	<10.0	<10	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<10.0	<10.0	<10	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L		<10.0	<10.0	<10	<10.0
NAPHTHALENE	10	ug/L		<10.0	<10.0	<10	<10.0
NITROBENZENE	10	ug/L		<10.0	<10.0	<10	<10.0
PENTACHLOROPHENOL	25	ug/L		<25.0	<25.0	<24.9	<25.0
PHENANTHRENE	10	ug/L		<10.0	<10.0	<10	<10.0
PHENOL	10	ug/L		<10.0	<10.0	<10	<10.0
PYRENE	10	ug/L		<10.0	<10.0	<10	<10.0

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	UCD1-028	UCD2-029	UCD2-030	UCD2-031	UCD2-032	UCD2-036	UCD2-037
			Sample ID Date QA	GWGW0660 06/03/98	GWGW0661 06/03/98	GWGW0652 06/01/98	GWGW0653 06/01/98	GWGW0657 06/02/98	GWGW0662 06/04/98	GWGW0664 06/04/98
1,2,4-TRICHLOROBENZENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
1,4-DICHLOROBENZENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,4,5-TRICHLOROPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,4,6-TRICHLOROPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,4-DICHLOROPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,4-DIMETHYLPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,4-DINITROPHENOL	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
2,4-DINITROTOLUENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2,6-DINITROTOLUENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-CHLORONAPHTHALENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-CHLOROPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-METHYLNAPHTHALENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-METHYLPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
2-NITROANILINE	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
2-NITROPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
3,3'-DICHLOROBENZIDINE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
3-NITROANILINE	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
4,6-DINITRO-2-METHYLPHENOL	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
4-CHLORO-3-METHYLPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
4-CHLOROANILINE	10	ug/L		<19.6	<19.6	<19.6	<19.6	<19.6	<19.6	<19.6
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
4-METHYLPHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
4-NITROANILINE	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
4-NITROPHENOL	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
ACENAPHTHENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
ACENAPHTHYLENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
ANTHRACENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BENZO(A)ANTHRACENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BENZO(A)PYRENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BENZO(B)FLUORANTHENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BENZO(G,H,I)PERYLENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BENZO(K)FLUORANTHENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
BUTYLBENZYLPHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
CARBAZOLE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
CHRYSENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DI-N-BUTYL PHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DI-N-OCTYL PHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DIBENZ(A,H)ANTHRACENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DIBENZOFURAN	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DIETHYL PHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
DIMETHYL PHTHALATE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
FLUORANTHENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
FLUORENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
HEXACHLOROBENZENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
HEXACHLOROBUTADIENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
HEXACHLOROETHANE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
ISOPHORONE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
N-NITROSODIPHENYLAMINE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
NAPHTHALENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
NITROBENZENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
PENTACHLOROPHENOL	25	ug/L		<24.5	<24.5	<24.5	<24.5	<24.5	<24.5	<24.5
PHENANTHRENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
PHENOL	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
PYRENE	10	ug/L		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-038	UCD2-039	UCD2-040	UCD4-041
	Sample ID		GWGW0665	GWGW0658	GWGW0654	GWGW0651
	Date QA		06/03/98	06/03/98	06/01/98	06/01/98
Analyte	CRDL	Units				
1,2,4-TRICHLOROBENZENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
1,4-DICHLOROBENZENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,4,5-TRICHLOROPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,4,6-TRICHLOROPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,4-DICHLOROPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,4-DIMETHYLPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,4-DINITROPHENOL	25	ug/L	<24.5	<24.5	<24.5	<24.5
2,4-DINITROTOLUENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
2,6-DINITROTOLUENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-CHLORONAPHTHALENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-CHLOROPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-METHYLNAPHTHALENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-METHYHPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
2-NITROANILINE	25	ug/L	<24.5	<24.5	<24.5	<24.5
2-NITROPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
3,3'-DICHLOROBENZIDINE	10	ug/L	<9.8	<9.8	<9.8	<9.8
3-NITROANILINE	25	ug/L	<24.5	<24.5	<24.5	<24.5
4,6-DINITRO-2-METHYLPHENOL	25	ug/L	<24.5	<24.5	<24.5	<24.5
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<9.8	<9.8	<9.8	<9.8
4-CHLORO-3-METHYLPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
4-CHLOROANILINE	10	ug/L	<19.6	<19.6	<19.6	<19.6
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<9.8	<9.8	<9.8	<9.8
4-METHYLPHENOL	10	ug/L	<9.8	<9.8	<9.8	<9.8
4-NITROANILINE	25	ug/L	<24.5	<24.5	<24.5	<24.5
4-NITROPHENOL	25	ug/L	<24.5	RI	<24.5	RI
ACENAPHTHENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
ACENAPHTHYLENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
ANTHRACENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BENZO(A)ANTHRACENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BENZO(A)PYRENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BENZO(B)FLUORANTHENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BENZO(G,H,I)PERYLENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BENZO(K)FLUORANTHENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<9.8	UJI	<9.8	UJI
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
BUTYLBENZYLPHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
CARBAZOLE	10	ug/L	<9.8	<9.8	<9.8	<9.8
CHRYSENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
DI-N-BUTYL PHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
DI-N-OCTYL PHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
DIBENZ(A,H)ANTHRACENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
DIBENZOFURAN	10	ug/L	<9.8	<9.8	<9.8	<9.8
DIETHYL PHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
DIMETHYL PHTHALATE	10	ug/L	<9.8	<9.8	<9.8	<9.8
FLUORANTHENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
FLUORENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
HEXACHLOROBENZENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
HEXACHLOROBUTADIENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
HEXACHLOROETHANE	10	ug/L	<9.8	<9.8	<9.8	<9.8
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
ISOPHORONE	10	ug/L	<9.8	<9.8	<9.8	<9.8
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<9.8	<9.8	<9.8	<9.8
N-NITROSODIPHENYLAMINE	10	ug/L	<9.8	<9.8	<9.8	<9.8
NAPHTHALENE	10	ug/L	<9.8	UJI	<9.8	UJI
NITROBENZENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
PENTACHLOROPHENOL	25	ug/L	<24.5	<24.5	<24.5	<24.5
PHENANTHRENE	10	ug/L	<9.8	<9.8	<9.8	<9.8
PHENOL	10	ug/L	<9.8	RI	<9.8	RI
PYRENE	10	ug/L	<9.8	<9.8	<9.8	<9.8

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

			Location Sample ID Date QA	UCD4-042 GWGW0655 06/02/98	UCD4-043 GWGW0659 06/02/98
Analyte	CRDL	Units			
1,2,4-TRICHLOROBENZENE	10	ug/L		<9.8	<9.8
1,4-DICHLOROBENZENE	10	ug/L		<9.8	<9.8
2,4,5-TRICHLOROPHENOL	10	ug/L		<9.8	<9.8
2,4,6-TRICHLOROPHENOL	10	ug/L		<9.8	<9.8
2,4-DICHLOROPHENOL	10	ug/L		<9.8	<9.8
2,4-DIMETHYLPHENOL	10	ug/L		<9.8	<9.8
2,4-DINITROPHENOL	25	ug/L		<24.5	<24.5
2,4-DINITROTOLUENE	10	ug/L		<9.8	<9.8
2,6-DINITROTOLUENE	10	ug/L		<9.8	<9.8
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<9.8	<9.8
2-CHLORONAPHTHALENE	10	ug/L		<9.8	<9.8
2-CHLOROPHENOL	10	ug/L		<9.8	<9.8
2-METHYLNAPHTHALENE	10	ug/L		<9.8	<9.8
2-METHYLPHENOL	10	ug/L		<9.8	<9.8
2-NITROANILINE	25	ug/L		<24.5	<24.5
2-NITROPHENOL	10	ug/L		<9.8	<9.8
3,3'-DICHLOROBENZIDINE	10	ug/L		<9.8	<9.8
3-NITROANILINE	25	ug/L		<24.5	<24.5
4,6-DINITRO-2-METHYLPHENOL	25	ug/L		<24.5	<24.5
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<9.8	<9.8
4-CHLORO-3-METHYLPHENOL	10	ug/L		<9.8	<9.8
4-CHLOROANILINE	10	ug/L		<19.6	<19.6
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<9.8	<9.8
4-METHYLPHENOL	10	ug/L		<9.8	<9.8
4-NITROANILINE	25	ug/L		<24.5	<24.5
4-NITROPHENOL	25	ug/L		<24.5	<24.5
ACENAPHTHENE	10	ug/L		<9.8	<9.8
ACENAPHTHYLENE	10	ug/L		<9.8	<9.8
ANTHRACENE	10	ug/L		<9.8	<9.8
BENZO(A)ANTHRACENE	10	ug/L		<9.8	<9.8
BENZO(A)PYRENE	10	ug/L		<9.8	<9.8
BENZO(B)FLUORANTHENE	10	ug/L		<9.8	<9.8
BENZO(G,H,I)PERYLENE	10	ug/L		<9.8	<9.8
BENZO(K)FLUORANTHENE	10	ug/L		<9.8	<9.8
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<9.8	<9.8
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<9.8	<9.8
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<9.8	<9.8
BUTYLBENZYLPHTHALATE	10	ug/L		<9.8	<9.8
CARBAZOLE	10	ug/L		<9.8	<9.8
CHRYSENE	10	ug/L		<9.8	<9.8
DI-N-BUTYL PHTHALATE	10	ug/L		<9.8	<9.8
DI-N-OCTYL PHTHALATE	10	ug/L		<9.8	<9.8
DIBENZ(A,H)ANTHRACENE	10	ug/L		<9.8	<9.8
DIBENZOFURAN	10	ug/L		<9.8	<9.8
DIETHYL PHTHALATE	10	ug/L		<9.8	<9.8
DIMETHYL PHTHALATE	10	ug/L		<9.8	<9.8
FLUORANTHENE	10	ug/L		<9.8	<9.8
FLUORENE	10	ug/L		<9.8	<9.8
HEXACHLOROBENZENE	10	ug/L		<9.8	<9.8
HEXACHLOROBUTADIENE	10	ug/L		<9.8	<9.8
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<9.8	<9.8
HEXACHLOROETHANE	10	ug/L		<9.8	<9.8
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<9.8	<9.8
ISOPHORONE	10	ug/L		<9.8	<9.8
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<9.8	<9.8
N-NITROSODIPHENYLAMINE	10	ug/L		<9.8	<9.8
NAPHTHALENE	10	ug/L		<9.8	<9.8
NITROBENZENE	10	ug/L		<9.8	<9.8
PENTACHLOROPHENOL	25	ug/L		<24.5	<24.5
PHENANTHRENE	10	ug/L		<9.8	<9.8
PHENOL	10	ug/L		<9.8	<9.8
PYRENE	10	ug/L		<9.8	<9.8

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location	UCD1-028	UCD2-029	UCD2-030	UCD2-031	UCD2-032
		Sample ID	GWGW0712	GWGW0713	GWGW0714	GWGW0715	GWGW0698
		Date	09/01/98	09/01/98	09/01/98	09/01/98	08/25/98
		QA					
Analyte	CRDL	Units					
1,2,4-TRICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
1,4-DICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2,4,5-TRICHLOROPHENOL	10	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
2,4,6-TRICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2,4-DICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2,4-DIMETHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2,4-DINITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
2,4-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2,6-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-CHLORONAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-CHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-METHYLNAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-METHYPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
2-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
2-NITROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
3,3'-DICHLOROBENZIDINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
3,4-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
3-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
4,6-DINITRO-2-METHYLPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
4-CHLORO-3-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
4-CHLOROANILINE	10	ug/L	<20.0	<20.0	<20.0	<20.0	<19.6
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
4-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
4-NITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
ACENAPHTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
ACENAPHTHYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BENZO(A)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BENZO(A)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BENZO(B)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BENZO(G,H,I)PERYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BENZO(K)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
BUTYLBENZYLPHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
CARBAZOLE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
CHRYSENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DI-N-BUTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DI-N-OCTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DIBENZ(A,H)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DIBENZOFURAN	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DIETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
DIMETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
FLUORENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
HEXACHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
HEXACHLOROBUTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
HEXACHLOROETHANE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
ISOPHORONE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
N-NITROSODIPHENYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
NAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
NITROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
PENTACHLOROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<24.5
PHENANTHRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
PHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8
PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<9.8

QA=Samples taken as part of the quality assurance program.
<=Below detection limit.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-039
			Sample ID Date QA	GWGW0706 09/02/98	GWGW0718 09/02/98	GWGW0719 09/01/98	GWGW0720 09/02/98	GWGW0705 09/02/98	GWGW0717 09/02/98 DUPLICATE
1,2,4-TRICHLOROBENZENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
1,4-DICHLOROBENZENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2,4,5-TRICHLOROPHENOL	10	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
2,4,6-TRICHLOROPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2,4-DICHLOROPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2,4-DIMETHYLPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2,4-DINITROPHENOL	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
2,4-DINITROTOLUENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2,6-DINITROTOLUENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-CHLORONAPHTHALENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-CHLOROPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-METHYLNAPHTHALENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-METHYPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
2-NITROANILINE	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
2-NITROPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
3,3'-DICHLOROBENZIDINE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
3,4-METHYLPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
3-NITROANILINE	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
4,6-DINITRO-2-METHYLPHENOL	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
4-CHLORO-3-METHYLPHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
4-CHLOROANILINE	10	ug/L		<19.8	<19.8	<20.0	<19.8	<19.8	<19.8
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
4-NITROANILINE	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
4-NITROPHENOL	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
ACENAPHTHENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
ACENAPHTHYLENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
ANTHRACENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BENZO(A)ANTHRACENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BENZO(A)PYRENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BENZO(B)FLUORANTHENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BENZO(G,H,I)PERYLENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BENZO(K)FLUORANTHENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
BUTYLBENZYLPHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
CARBAZOLE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
CHRYSENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DI-N-BUTYL PHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DI-N-OCTYL PHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DIBENZ(A,H)ANTHRACENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DIBENZOFURAN	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DIETHYL PHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
DIMETHYL PHTHALATE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
FLUORANTHENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
FLUORENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
HEXACHLOROBENZENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
HEXACHLOROBUTADIENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
HEXACHLOROETHANE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
ISOPHORONE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
N-NITROSODIPHENYLAMINE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
NAPHTHALENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
NITROBENZENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
PENTACHLOROPHENOL	25	ug/L		<24.8	<24.8	<25.0	<24.8	<24.8	<24.8
PHENANTHRENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
PHENOL	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9
PYRENE	10	ug/L		<9.9	<9.9	<10.0	<9.9	<9.9	<9.9

QA=Samples taken as part of the quality assurance program.
 <=Below detection limit.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	UCD2-040	UCD4-041	UCD4-042	UCD4-043
			Sample ID Date QA	GWGW0707 09/01/98	GWGW0708 08/27/98	GWGW0699 08/25/98	GWGW0700 08/25/98
1,2,4-TRICHLOROBENZENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
1,4-DICHLOROBENZENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
2,4,5-TRICHLOROPHENOL	10	ug/L		<25.6	<24.8	<25.0	<24.5
2,4,6-TRICHLOROPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
2,4-DICHLOROPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
2,4-DIMETHYLPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
2,4-DINITROPHENOL	25	ug/L		<25.6	<24.8 UJc	<25.0	<24.5
2,4-DINITROTOLUENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
2,6-DINITROTOLUENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<10.2	<9.9	<10.0 UJI	<9.8 UJI
2-CHLORONAPHTHALENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
2-CHLOROPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
2-METHYLNAPHTHALENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
2-METHYLPHENOL	10	ug/L		<10.2	<9.9	<10.0 UJI	<9.8 UJI
2-NITROANILINE	25	ug/L		<25.6	<24.8	<25.0	<24.5
2-NITROPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
3,3'-DICHLOROBENZIDINE	10	ug/L		<10.2	<9.9 UJI	<10.0 UJI	<9.8 UJI
3,4-METHYLPHENOL	10	ug/L		<10.2	<9.9	<10.0 UJI	<9.8 UJI
3-NITROANILINE	25	ug/L		<25.6	<24.8	<25.0	<24.5
4,6-DINITRO-2-METHYLPHENOL	25	ug/L		<25.6	<24.8	<25.0	<24.5
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<10.2	<9.9	<10.0	<9.8
4-CHLORO-3-METHYLPHENOL	10	ug/L		<10.2	<9.9	<10.0	<9.8
4-CHLOROANILINE	10	ug/L		<20.5	<19.8	<20.0	<19.6
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<10.2	<9.9	<10.0	<9.8
4-NITROANILINE	25	ug/L		<25.6 UJI	<24.8	<25.0	<24.5 RI
4-NITROPHENOL	25	ug/L		<25.6	<24.8	<25.0 RI	<24.5 RI
ACENAPHTHENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
ACENAPHTHYLENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
ANTHRACENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BENZO(A)ANTHRACENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BENZO(A)PYRENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BENZO(B)FLUORANTHENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BENZO(G,H,I)PERYLENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BENZO(K)FLUORANTHENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<10.2	<9.9	<10.0	<9.8
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
BUTYLBENZYLPHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
CARBAZOLE	10	ug/L		<10.2	<9.9	<10.0	<9.8
CHRYSENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
DI-N-BUTYL PHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
DI-N-OCTYL PHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
DIBENZ(A,H)ANTHRACENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
DIBENZOFURAN	10	ug/L		<10.2	<9.9	<10.0	<9.8
DIETHYL PHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
DIMETHYL PHTHALATE	10	ug/L		<10.2	<9.9	<10.0	<9.8
FLUORANTHENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
FLUORENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
HEXACHLOROBENZENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
HEXACHLOROBUTADIENE	10	ug/L		<10.2	<9.9	<10.0 UJI	<9.8 UJI
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<10.2 UJI	<9.9 UJI	<10.0 RI	<9.8 RI
HEXACHLOROETHANE	10	ug/L		<10.2	<9.9	<10.0 UJI	<9.8 UJI
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
ISOPHORONE	10	ug/L		<10.2	<9.9	<10.0	<9.8
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<10.2	<9.9	<10.0	<9.8
N-NITROSODIPHENYLAMINE	10	ug/L		<10.2	<9.9	<10.0	<9.8
NAPHTHALENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
NITROBENZENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
PENTACHLOROPHENOL	25	ug/L		<25.6	<24.8	<25.0	<24.5
PHENANTHRENE	10	ug/L		<10.2	<9.9	<10.0	<9.8
PHENOL	10	ug/L		<10.2 UJI	<9.9 UJI	<10.0 RI	<9.8 RI
PYRENE	10	ug/L		<10.2	<9.9	<10.0	<9.8

QA=Samples taken as part of the quality assurance program.
 <=Below detection limit.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	UCD2-029	UCD1-028	UCD2-017	UCD2-029	UCD2-030
			Sample ID Date QA	GWGW0734 11/02/98	GWGW0735 11/02/98 DUPLICATE	GWGW0748 11/09/98	GWGW0736 11/02/98	GWGW0737 11/02/98
1,2,4-TRICHLOROBENZENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
1,4-DICHLOROBENZENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2,4,5-TRICHLOROPHENOL	10	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
2,4,6-TRICHLOROPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DICHLOROPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DIMETHYLPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DINITROPHENOL	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
2,4-DINITROTOLUENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2,6-DINITROTOLUENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-CHLORONAPHTHALENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-CHLOROPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-METHYLNAPHTHALENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-METHYPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
2-NITROANILINE	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
2-NITROPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
3-NITROANILINE	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
4,6-DINITRO-2-METHYLPHENOL	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
4-CHLOROANILINE	10	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
4-METHYLPHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
4-NITROANILINE	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
4-NITROPHENOL	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
ACENAPHTHENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
ACENAPHTHYLENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
ANTHRACENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(A)ANTHRACENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(A)PYRENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(B)FLUORANTHENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(K)FLUORANTHENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
CARBAZOLE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
CHRYSENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DIBENZOFURAN	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DIETHYL PHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
DIMETHYL PHTHALATE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
FLUORANTHENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
FLUORENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROBENZENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROBUTADIENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROETHANE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
ISOPHORONE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
NAPHTHALENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
NITROBENZENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
PENTACHLOROPHENOL	25	ug/L		<25.0	<25.0	<25.0	<25.0	<25.0
PHENANTHRENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
PHENOL	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0
PYRENE	10	ug/L		<10.0	<10.0	<10.0	<10.0	<10.0

QA=Samples taken as part of the quality assurance program.

--=Not Analyzed.

<=Below detection limit.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		UCD2-031	UCD2-032	UCD2-036	UCD2-037	UCD2-038
	Sample ID		GWGW0738	GWGW0740	GWGW0742	GWGW0749	GWGW0743
	Date		11/02/98	11/03/98	11/03/98	11/04/98	11/03/98
CRDL	Units	QA					
1,2,4-TRICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
1,4-DICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2,4,5-TRICHLOROPHENOL	10	ug/L	<25.0	<25.0	<25.0	<10.2	<25.0
2,4,6-TRICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2,4-DICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2,4-DIMETHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2,4-DINITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
2,4-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2,6-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-CHLORONAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-CHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-METHYLNAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
2-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
2-NITROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
3,3'-DICHLOROBENZIDINE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
3-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
4,6-DINITRO-2-METHYLPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
4-CHLOROANILINE	10	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
4-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
4-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
4-NITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
ACENAPHTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
ACENAPHTHYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BENZO(A)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BENZO(A)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BENZO(B)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BENZO(K)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
CARBAZOLE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
CHRYSENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DIBENZOFURAN	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DIETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
DIMETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
FLUORENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
HEXACHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
HEXACHLOROBUTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
HEXACHLOROETHANE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
ISOPHORONE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
NAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
NITROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
PENTACHLOROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.5	<25.0
PHENANTHRENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
PHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0
PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.2	<10.0

QA=Samples taken as part of the quality assurance program.

--=Not Analyzed.

<=Below detection limit.

APPENDIX B
SEMI-VOLATILE ORGANIC COMPOUNDS
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Location	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043
		Sample ID Date QA	GWGW0744 11/03/98	GWGW0739 11/02/98	GWGW0759 11/09/98	GWGW0760 11/10/98	GWGW0761 11/10/98
		Units					
1,2,4-TRICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
1,4-DICHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2,4,5-TRICHLOROPHENOL	10	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
2,4,6-TRICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DICHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DIMETHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2,4-DINITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
2,4-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2,6-DINITROTOLUENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-2'-OXYBIS(1-CHLOROPROPANE)	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-CHLORONAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-CHLOROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-METHYLNAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-METHYPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
2-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
2-NITROPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
3,3'-DICHLORO BENZIDINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
3-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
4,6-DINITRO-2-METHYLPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
4-BROMOPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
4-CHLORO-3-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
4-CHLOROANILINE	10	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
4-CHLOROPHENYL-PHENYLETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
4-METHYLPHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
4-NITROANILINE	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
4-NITROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
ACENAPHTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
ACENAPHTHYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(A)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(A)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(B)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(G,H,I)PERYLENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BENZO(K)FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-CHLOROETHOXY)METHANE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-CHLOROETHYL) ETHER	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BIS(2-ETHYLHEXYL)PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
BUTYLBENZYLPHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
CARBAZOLE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
CHRYSENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DI-N-BUTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DI-N-OCTYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DIBENZ(A,H)ANTHRACENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DIBENZOFURAN	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DIETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
DIMETHYL PHTHALATE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
FLUORANTHENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
FLUORENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROBUTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROCYCLOPENTADIENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
HEXACHLOROETHANE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
INDENO(1,2,3-C,D)PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
ISOPHORONE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
N-NITROSODI-N-PROPYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
N-NITROSODIPHENYLAMINE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
NAPHTHALENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
NITROBENZENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
PENTACHLOROPHENOL	25	ug/L	<25.0	<25.0	<25.0	<25.0	<25.0
PHENANTHRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
PHENOL	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0
PYRENE	10	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0

QA=Samples taken as part of the quality assurance program.

--=Not Analyzed.

<=Below detection limit.

**APPENDIX B
PESTICIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-004 GWGW0601 02/17/98	UCD1-010 GWGW0624 03/02/98	UCD1-011 GWGW0616 02/24/98	UCD1-012 GWGW0606 02/18/98	UCD1-013 GWGW0605 02/18/98	UCD1-018 GWGW0617 02/24/98	UCD1-020 GWGW0612 02/23/98	UCD1-020 GWGW0614 02/23/98 DUPLICATE	UCD1-024 GWGW0615 02/23/98	UCD1-025 GWGW0635 03/04/98
Analyte	CRDL	Units										
4,4'-DDD	0.02	ug/L	<0.10	<0.0087 JP Ru	<0.099	<0.10	0.014 JP	<0.10	<0.10	0.0066 JP	0.015 J	<0.12
4,4'-DDE	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	<0.10	<0.12
4,4'-DDT	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	0.0098 JP	<0.12
ALDRIN	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
ALPHA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
ALPHA-CHLORDANE	0.01	ug/L	<0.050	<0.011 JP Ru	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.010 JP Ru
AROCLOR-1016	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
AROCLOR-1221	0.4	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.4
AROCLOR-1232	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
AROCLOR-1242	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
AROCLOR-1248	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
AROCLOR-1254	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
AROCLOR-1260	0.2	ug/L	<1.0	<0.99	<0.99	<1.0	<0.99	<1.0	<1.0	<1.0	<1.0	<1.2
BETA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
DELTA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
DIELDRIN	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	0.020 J	<0.10	<0.10	<0.10	<0.10	<0.12
ENDOSULFAN I	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
ENDOSULFAN II	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	<0.10	<0.12
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	<0.10	<0.12
ENDRIN	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.009 JP Ru	<0.10	<0.10	<0.10	<0.10	<0.12
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	<0.10	<0.12
ENDRIN KETONE	0.02	ug/L	<0.10	<0.099	<0.099	<0.10	<0.099	<0.10	<0.10	<0.10	<0.10	<0.12
GAMMA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
GAMMA-CHLORDANE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
HEPTACHLOR	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.051	<0.050	<0.050	<0.050	<0.059
METHOXYCHLOR	0.1	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.51	<0.50	<0.50	<0.50	<0.59
TOXAPHENE	1.0	ug/L	<10.0	<9.9	<9.9	<10.0	<9.9	<10.2	<10.0	<10.0	<10.0	<11.8

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.
- = Not Analyzed.

APPENDIX B
PESTICIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-028	UCD1-034	UCD2-007	UCD2-014	UCD2-015	UCD2-017	UCD2-026	UCD2-029	UCD2-030	UCD2-030
Sample ID			GWGW0628	GWGW0621	GWGW0611	GWGW0604	GWGW0602	GWGW0618	GWGW0636	GWGW0629	GWGW0630	GWGW0631
Date			03/03/98	03/02/98	02/23/98	02/18/98	02/17/98	02/24/98	03/04/98	03/03/98	03/03/98	03/03/98
QA												DUPLICATE
Analyte	CRDL	Units										
4,4'-DDD	0.02	ug/L	<0.10	0.005 J	<0.10	<0.10	0.0077 J	<0.10	<0.013 JP Ru	<0.098	<0.099	<0.099
4,4'-DDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.020 JP Ru	<0.098	<0.099	<0.099
4,4'-DDT	0.02	ug/L	<0.10	<0.007 JP Ru	<0.10	<0.10	<0.10	<0.10	0.033 JP	<0.098	<0.099	<0.099
ALDRIN	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
ALPHA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
ALPHA-CHLORDANE	0.01	ug/L	<0.050	<0.0051 JP Ru	<0.050	<0.053	<0.050	<0.050	<0.0068 JP Ru	<0.049	<0.050	<0.050
AROCLOR-1016	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
AROCLOR-1221	0.4	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.4	<2.0	<2.0	<2.0
AROCLOR-1232	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
AROCLOR-1242	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
AROCLOR-1248	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
AROCLOR-1254	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
AROCLOR-1260	0.2	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.2	<0.98	<0.99	<0.99
BETA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
DELTA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
DIELDRIN	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
ENDOSULFAN I	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
ENDOSULFAN II	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
ENDRIN	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
ENDRIN KETONE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.12	<0.098	<0.099	<0.099
GAMMA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
GAMMA-CHLORDANE	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
HEPTACHLOR	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.050	<0.050	<0.050	<0.053	<0.050	<0.050	<0.060	<0.049	<0.050	<0.050
METHOXYCHLOR	0.1	ug/L	<0.50	<0.50	<0.50	<0.53	<0.50	<0.50	<0.60	<0.49	<0.50	<0.50
TOXAPHENE	1.0	ug/L	<10.0	<10.0	<10.0	<10.5	<10.0	<10.0	<11.9	<9.8	<9.9	<9.9

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
PESTICIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041	UCD4-042
Sample ID			GWGW0634	GWGW0626	GWGW0622	GWGW0625	GWGW0637	GWGW0623	GWGW0638	GWGW0633	GWGW0632	GWGW0639
Date			03/04/98	03/03/98	03/02/98	03/02/98	03/05/98	03/02/98	03/05/98	03/04/98	03/04/98	03/05/98
QA												
Analyte	CRDL	Units										
4,4'-DDD	0.02	ug/L	<0.0082 JP Ru	<0.099	<0.10	0.014 JI	<0.099	0.0081 JP	<0.10	<0.12	<0.10	<0.096
4,4'-DDE	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
4,4'-DDT	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ALDRIN	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
ALPHA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
ALPHA-CHLORDANE	0.01	ug/L	<0.021 JP Ru	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
AROCLOR-1016	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
AROCLOR-1221	0.4	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.4	<2.0	<1.9
AROCLOR-1232	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
AROCLOR-1242	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
AROCLOR-1248	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
AROCLOR-1254	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
AROCLOR-1260	0.2	ug/L	<1.0	<0.99	<1.0	<1.0	<0.99	<1.0	<1.0	<1.2	<1.0	<0.96
BETA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
DELTA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
DIELDRIN	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ENDOSULFAN I	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
ENDOSULFAN II	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ENDRIN	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
ENDRIN KETONE	0.02	ug/L	<0.10	<0.099	<0.10	<0.10	<0.099	<0.10	<0.10	<0.12	<0.10	<0.096
GAMMA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
GAMMA-CHLORDANE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
HEPTACHLOR	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	<0.048
METHOXYCHLOR	0.1	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.59	<0.50	<0.48
TOXAPHENE	1.0	ug/L	<10.0	<9.9	<10.0	<10.0	<5.0	<10.0	<5.0	<11.8	<10.0	<4.8

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
PESTICIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

		Location	UCD4-043	
		Sample ID	GWGW0627	
		Date	03/03/98	
		QA		
Analyte	CRDL	Units		
4,4'-DDD	0.02	ug/L	0.010	JP Ru
4,4'-DDE	0.02	ug/L	<0.098	
4,4'-DDT	0.02	ug/L	<0.098	
ALDRIN	0.01	ug/L	<0.049	
ALPHA-BHC	0.01	ug/L	<0.049	
ALPHA-CHLORDANE	0.01	ug/L	0.012	JP Ru
AROCLOR-1016	0.2	ug/L	<0.98	
AROCLOR-1221	0.4	ug/L	<2.0	
AROCLOR-1232	0.2	ug/L	<0.98	
AROCLOR-1242	0.2	ug/L	<0.98	
AROCLOR-1248	0.2	ug/L	<0.98	
AROCLOR-1254	0.2	ug/L	<0.98	
AROCLOR-1260	0.2	ug/L	<0.98	
BETA-BHC	0.01	ug/L	<0.049	
DELTA-BHC	0.01	ug/L	<0.049	
DIELDRIN	0.02	ug/L	<0.098	
ENDOSULFAN I	0.01	ug/L	<0.049	
ENDOSULFAN II	0.02	ug/L	<0.098	
ENDOSULFAN SULFATE	0.02	ug/L	<0.098	
ENDRIN	0.02	ug/L	<0.098	
ENDRIN ALDEHYDE	0.02	ug/L	<0.098	
ENDRIN KETONE	0.02	ug/L	<0.098	
GAMMA-BHC	0.01	ug/L	<0.049	
GAMMA-CHLORDANE	0.01	ug/L	<0.049	
HEPTACHLOR	0.01	ug/L	<0.049	
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.049	
METHOXYCHLOR	0.1	ug/L	<0.49	
TOXAPHENE	1.0	ug/L	<9.8	

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
PESTICIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-004 GWGW0640 05/26/98	UCD1-012 GWGW0641 05/26/98	UCD1-013 GWGW0642 05/26/98	UCD1-028 GWGW0660 06/03/98	UCD2-014 GWGW0643 05/26/98	UCD2-015 GWGW0644 05/26/98	UCD2-029 GWGW0661 06/03/98	UCD2-030 GWGW0652 06/01/98
Analyte	CRDL	Units								
4,4'-DDD	0.02	ug/L	<0.0043 JP Ru	0.0029 J	<0.025	0.031 J	<0.0073 JP UJu	<0.025	0.011 J	<0.050
4,4'-DDE	0.02	ug/L	<0.00044 JP Ru	<0.026	<0.025	0.029 J	<0.025	<0.025	<0.010 JP NJJu	<0.050
4,4'-DDT	0.02	ug/L	0.0067 J	<0.026	<0.0033 JP UJu	<0.050	<0.010 JP UJu	<0.025	<0.050	<0.050
ALDRIN	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
ALPHA-BHC	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
ALPHA-CHLORDANE	0.01	ug/L	0.0068 J	<0.0057 JP UJu	0.016	<0.025	0.0026 J	0.0026 JP NJJu	<0.0098 JP Ru	<0.025
AROCLOR-1016	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
AROCLOR-1221	0.4	ug/L	<0.50	<0.52	<0.50	<0.99	<0.50	<0.50	<0.99	<1.0
AROCLOR-1232	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
AROCLOR-1242	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
AROCLOR-1248	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
AROCLOR-1254	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
AROCLOR-1260	0.2	ug/L	<0.25	<0.26	<0.25	<0.50	<0.25	<0.25	<0.50	<0.50
BETA-BHC	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
DELTA-BHC	0.01	ug/L	<0.0024 JP Ru	<0.0011 JP UJu	<0.0017 JP UJu	<0.025	<0.000052 JP Ru	<0.012	<0.025	<0.025
DIELDRIN	0.02	ug/L	<0.025	<0.026	0.020 J	<0.050	<0.025	<0.025	<0.050	<0.050
ENDOSULFAN I	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
ENDOSULFAN II	0.02	ug/L	<0.025	<0.026	<0.025	0.009 J	<0.025	<0.025	<0.050	<0.050
ENDOSULFAN SULFATE	0.02	ug/L	<0.025	<0.026	<0.025	<0.050	<0.025	<0.025	<0.050	<0.050
ENDRIN	0.02	ug/L	<0.025	<0.026	0.010 J	0.025 JP Ju	<0.025	<0.025	<0.050	<0.050
ENDRIN ALDEHYDE	0.02	ug/L	<0.025	<0.026	<0.025	<0.050	<0.025	<0.025	<0.050	<0.050
ENDRIN KETONE	0.02	ug/L	<0.025	<0.026	0.0044 JP NJJu	<0.050	<0.025	<0.025	<0.050	<0.050
GAMMA-BHC	0.01	ug/L	<0.012	<0.013	<0.0034 JP UJu	0.018 JP NJJu	<0.012	<0.012	<0.0061 JP Ru	<0.025
GAMMA-CHLORDANE	0.01	ug/L	0.0068 J	0.0046 J	0.016	<0.025	<0.0026 JP UJu	0.003 J	0.007 J	<0.025
HEPTACHLOR	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.012	<0.013	<0.012	<0.025	<0.012	<0.012	<0.025	<0.025
METHOXYCHLOR	0.1	ug/L	<0.12	<0.13	<0.12	0.036 J	<0.12	<0.12	<0.25	<0.25
TOXAPHENE	1.0	ug/L	<1.2	<1.3	<1.2	<2.5	<1.2	<1.2	<2.5	<2.5

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
PESTICIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD2-031	UCD2-032	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041
Sample ID			GWGW0653	GWGW0657	GWGW0662	GWGW0664	GWGW0665	GWGW0658	GWGW0654	GWGW0651
Date			06/01/98	06/02/98	06/04/98	06/04/98	06/03/98	06/03/98	06/01/98	06/01/98
QA										
Analyte	CRDL	Units								
4,4'-DDD	0.02	ug/L	<0.050	<0.050	<0.050	0.0068 JP NJ <u>u</u>	<0.0031 JP Ru	<0.050	0.0064 JP NJ <u>u</u>	0.014 JP Ju
4,4'-DDE	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	0.013 J
4,4'-DDT	0.02	ug/L	<0.050	<0.050	<0.050	0.0048 JP NJ <u>u</u>	<0.050	<0.050	<0.0043 JP Ru	<0.050
ALDRIN	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
ALPHA-BHC	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
ALPHA-CHLORDANE	0.01	ug/L	<0.0022 JP Ru	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.010 JP Ru
AROCLOR-1016	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
AROCLOR-1221	0.4	ug/L	<0.99	<0.99	<0.99	<0.98	<0.99	<0.99	<0.99	<1.0
AROCLOR-1232	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
AROCLOR-1242	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
AROCLOR-1248	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
AROCLOR-1254	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
AROCLOR-1260	0.2	ug/L	<0.50	<0.50	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50
BETA-BHC	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
DELTA-BHC	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
DIELDRIN	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	<0.050
ENDOSULFAN I	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
ENDOSULFAN II	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	<0.050
ENDOSULFAN SULFATE	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	<0.050
ENDRIN	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	0.0092 J
ENDRIN ALDEHYDE	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	<0.050
ENDRIN KETONE	0.02	ug/L	<0.050	<0.050	<0.050	<0.049	<0.050	<0.050	<0.050	<0.050
GAMMA-BHC	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	0.0081 JP NJ <u>u</u>
GAMMA-CHLORDANE	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	0.0072 JP Ju
HEPTACHLOR	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.004 JP Ru
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.025	<0.025	<0.025	<0.024	<0.025	<0.025	<0.025	<0.025
METHOXYCHLOR	0.1	ug/L	<0.25	<0.25	<0.25	<0.24	<0.25	<0.25	<0.25	<0.25
TOXAPHENE	1.0	ug/L	<2.5	<2.5	<2.5	<2.4	<2.5	<2.5	<2.5	<2.5

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.
-- = Not Analyzed.

**APPENDIX B
PESTICIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

		Location	UCD4-042	UCD4-043
		Sample ID	GWGW0655	GWGW0659
		Date	06/02/98	06/02/98
		QA		
Analyte	CRDL	Units		
4,4'-DDD	0.02	ug/L	<0.049	<0.050
4,4'-DDE	0.02	ug/L	<0.049	<0.050
4,4'-DDT	0.02	ug/L	<0.049	<0.050
ALDRIN	0.01	ug/L	<0.024	<0.025
ALPHA-BHC	0.01	ug/L	<0.024	<0.025
ALPHA-CHLORDANE	0.01	ug/L	<0.024	<0.025
AROCLOR-1016	0.2	ug/L	<0.49	<0.50
AROCLOR-1221	0.4	ug/L	<0.98	<1.0
AROCLOR-1232	0.2	ug/L	<0.49	<0.50
AROCLOR-1242	0.2	ug/L	<0.49	<0.50
AROCLOR-1248	0.2	ug/L	<0.49	<0.50
AROCLOR-1254	0.2	ug/L	<0.49	<0.50
AROCLOR-1260	0.2	ug/L	<0.49	<0.50
BETA-BHC	0.01	ug/L	<0.024	<0.025
DELTA-BHC	0.01	ug/L	<0.024	<0.025
DIELDRIN	0.02	ug/L	<0.049	<0.050
ENDOSULFAN I	0.01	ug/L	<0.024	<0.025
ENDOSULFAN II	0.02	ug/L	<0.049	<0.050
ENDOSULFAN SULFATE	0.02	ug/L	<0.049	<0.050
ENDRIN	0.02	ug/L	<0.049	<0.050
ENDRIN ALDEHYDE	0.02	ug/L	<0.049	<0.050
ENDRIN KETONE	0.02	ug/L	<0.049	<0.050
GAMMA-BHC	0.01	ug/L	<0.024	<0.025
GAMMA-CHLORDANE	0.01	ug/L	<0.024	<0.025
HEPTACHLOR	0.01	ug/L	<0.024	<0.025
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.024	<0.025
METHOXYCHLOR	0.1	ug/L	<0.24	<0.25
TOXAPHENE	1.0	ug/L	<2.4	<2.5

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
PESTICIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-012 GWGW0701 08/26/98	UCD1-013 GWGW0694 08/26/98	UCD1-013 GWGW0695 08/26/98 DUPLICATE	UCD1-028 GWGW0712 09/01/98	UCD2-014 GWGW0696 08/26/98	UCD2-029 GWGW0713 09/01/98	UCD2-030 GWGW0714 09/01/98	UCD2-031 GWGW0715 09/01/98	UCD2-032 GWGW0698 08/25/98	UCD2-035 GWGW0706 09/02/98
Analyte	CRDL	Units										
4,4'-DDD	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
4,4'-DDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
4,4'-DDT	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ALDRIN	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
ALPHA-BHC	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
ALPHA-CHLORDANE	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
AROCOR-1016	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1221	0.4	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1232	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1242	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1248	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1254	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
AROCOR-1260	0.2	ug/L	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062 UJs	<0.062	<0.062
BETA-BHC	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
DELTA-BHC	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
DIELDRIN	0.02	ug/L	<0.02	0.014 J	0.013 J	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ENDOSULFAN I	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
ENDOSULFAN II	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ENDOSULFAN SULFATE	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ENDRIN	0.02	ug/L	<0.02	0.0061 JP Ju	0.0058 J	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ENDRIN ALDEHYDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
ENDRIN KETONE	0.02	ug/L	<0.02	<0.02	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020 UJs	<0.02	<0.02
GAMMA-BHC	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
GAMMA-CHLORDANE	0.01	ug/L	<0.0099	<0.0028 JP Ru	0.0025 JP NJU	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
HEPTACHLOR	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.0099	<0.01	<0.01	<0.0099	<0.01	<0.0099	<0.0099	<0.0099 UJs	<0.01	<0.0099
METHOXYCHLOR	0.1	ug/L	<0.099	<0.1	<0.1	<0.099	<0.1	<0.099	<0.099	<0.099 UJs	<0.1	<0.099
TOXAPHENE	1.0	ug/L	<0.5	<0.5	<0.5	<0.50 UJc	<0.5	<0.50 UJc	<0.50 UJc	<0.50 UJc	<0.5	<0.5 UJc

QA =Samples taken as part of the quality assurance program.
< =Below detection limit.

**APPENDIX B
PESTICIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD2-036 GWGW0718 09/02/98	UCD2-037 GWGW0719 09/01/98	UCD2-038 GWGW0720 09/02/98	UCD2-039 GWGW0705 09/02/98	UCD2-039 GWGW0717 09/02/98 DUPLICATE	UCD2-040 GWGW0707 09/01/98	UCD4-041 GWGW0708 08/27/98	UCD4-042 GWGW0699 08/25/98	UCD4-043 GWGW0700 08/25/98
Analyte	CRDL	Units									
4,4'-DDD	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
4,4'-DDE	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
4,4'-DDT	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ALDRIN	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
ALPHA-BHC	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
ALPHA-CHLORDANE	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
AROCLOR-1016	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
AROCLOR-1221	0.4	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
AROCLOR-1232	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
AROCLOR-1242	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.032	<0.062	<0.062
AROCLOR-1248	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
AROCLOR-1254	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
AROCLOR-1260	0.2	ug/L	<0.062	<0.062 UJs	<0.064	<0.062	<0.062 UJs	<0.064 UJs	<0.064	<0.062	<0.062
BETA-BHC	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
DELTA-BHC	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
DIELDRIN	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ENDOSULFAN I	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
ENDOSULFAN II	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ENDOSULFAN SULFATE	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ENDRIN	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ENDRIN ALDEHYDE	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
ENDRIN KETONE	0.02	ug/L	<0.02	<0.020 UJs	<0.02	<0.02	<0.02 UJs	<0.020 UJs	<0.02	<0.02	<0.02
GAMMA-BHC	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
GAMMA-CHLORDANE	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
HEPTACHLOR	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.0099	<0.0099 UJs	<0.01	<0.0099	<0.01 UJs	<0.010 UJs	<0.010	<0.01	<0.01
METHOXYCHLOR	0.1	ug/L	<0.099	<0.099 UJs	<0.1	<0.099	<0.1 UJs	<0.10 UJs	<0.1	<0.1	<0.1
TOXAPHENE	1.0	ug/L	<0.5 UJc	<0.50 UJc	<0.51 UJc	<0.5 UJc	<0.5 UJc	<0.51 UJc	<0.5 UJc	<0.5	<0.5

QA =Samples taken as part of the quality assurance program.

< =Below detection limit.

APPENDIX B
PESTICIDES
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			UCD1-013	UCD1-012	UCD1-013	UCD1-028	UCD1-028	UCD2-014	UCD2-015	UCD2-029	UCD2-030	UCD2-031
Sample ID			GWGW0750	GWGW0757	GWGW0751	GWGW0734	GWGW0735	GWGW0754	GWGW0755	GWGW0736	GWGW0737	GWGW0738
Date			11/05/98	11/09/98	11/05/98	11/02/98	11/02/98	11/05/98	11/05/98	11/02/98	11/02/98	11/02/98
QA							DUPLICATE					
Analyte	CRDL	Units										
4,4'-DDD	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
4,4'-DDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
4,4'-DDT	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0088 J	<0.02	<0.02
ALDRIN	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ALPHA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ALPHA-CHLORDANE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AROCLOR-1016	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1221	0.4	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1232	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1242	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1248	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1254	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
AROCLOR-1260	0.2	ug/L	<0.05	<0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BETA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DELTA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DIELDRIN	0.02	ug/L	<0.02	<0.02	0.011 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDOSULFAN I	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ENDOSULFAN II	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDOSULFAN SULFATE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN	0.02	ug/L	<0.02	<0.02	0.0056 J	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN ALDEHYDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN KETONE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
GAMMA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
GAMMA-CHLORDANE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
HEPTACHLOR	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHOXYCHLOR	0.1	ug/L	<0.1	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.034	<0.1	<0.1
TOXAPHENE	1.0	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

QA =Samples taken as part of the quality assurance program.

NA =Not Analyzed.

-- =Below detection limit.

**APPENDIX B
PESTICIDES
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD2-032	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD4-041	UCD4-042	UCD4-043
Sample ID			GWGW0740	GWGW0742	GWGW0749	GWGW0743	GWGW0744	GWGW0739	GWGW0759	GWGW0760	GWGW0761
Date			11/03/98	11/03/98	11/04/98	11/03/98	11/03/98	11/02/98	11/09/98	11/10/98	11/10/98
QA											
Analyte	CRDL	Units									
4,4'-DDD	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	0.0056 J	<0.02	<0.02	<0.02
4,4'-DDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.015 J
4,4'-DDT	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	<0.02	<0.02	<0.02
ALDRIN	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ALPHA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ALPHA-CHLORDANE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AROCLOR-1016	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1221	0.4	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1232	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1242	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1248	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1254	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
AROCLOR-1260	0.2	ug/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.062	<0.062	<0.062
BETA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DELTA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.003 J
DIELDRIN	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDOSULFAN I	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ENDOSULFAN II	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.007 J
ENDOSULFAN SULFATE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN ALDEHYDE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ENDRIN KETONE	0.02	ug/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
GAMMA-BHC	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
GAMMA-CHLORDANE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
HEPTACHLOR	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHOXYCHLOR	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.1
TOXAPHENE	1.0	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

QA =Samples taken as part of the quality assurance program.

NA =Not Analyzed.

-- =Below detection limit.

APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-004 GWGW0601 02/17/98		UCD1-010 GWGW0624 03/02/98		UCD1-011 GWGW0616 02/24/98		UCD1-012 GWGW0606 02/18/98		UCD1-013 GWGW0605 02/18/98						
Analyte	CRDL	Units	MDA		MDA		MDA		MDA		MDA						
ACTINIUM-228	20	pCi/L	0.411±15.5	18.6	4.37±5.73	10.6	7.33±11.9	UJv	16.6	5.12±7.89	UJv	9.56	0.338±7.16	9.68			
AMERICIUM-241	1	pCi/L	—	—	—	—	—	—	—	—	—	—	—	—			
BISMUTH-212	70	pCi/L	19.2±19.6	UJv	37.3	9.43±10.8	20.3	16.1±15.4	UJv	30.9	2.89±10.5	18.6	2.59±17.9	UJv	16.6		
BISMUTH-214	10	pCi/L	5.68±8.64	UJv	10.5	72.8±12.7	4.77	68.1±15.4	7.01	0±5.28	5.57	0±3.33	6.3	6.3			
CARBON-14	20	pCi/L	—	—	—	—	—	—	—	253±15.8	16.2	1600±32.6	13.6	13.6			
CAESIUM-137	10	pCi/L	95.5±12	4.63	0.757±1.52	2.78	0.742±2.13	4	0.359±1.45	2.58	0.342±1.25	2.3	2.3				
COBALT-60	10	pCi/L	0.622±2.56	4.92	0.304±1.47	2.76	-0.286±2.03	3.8	1.88±1.34	UJv	2.57	-0.884±1.36	2.32	2.32			
GROSS ALPHA	2	pCi/L	1.06±0.67	Jv	1.01	3.91±2.53	Jv	3.87	11.1±2.71	1.83	8.2±3.77	Jv	4.62	5.52±2.2	2.5		
GROSS BETA	3	pCi/L	1.19±0.836	UJv	1.56	3.07±3.01	UJv	5.02	4.51±1.58	2.78	7.99±3.86	Jv	7.13	6±1.91	3.21		
LEAD-210	450	pCi/L	-33.2±513	763	157±207	UJv	270	179±263	UJv	412	113±156	UJv	239	16.5±228	UJv	209	
LEAD-212	10	pCi/L	6.15±4.68	UJv	8.26	2.91±3.04	UJv	4.79	4.2±3.84	UJv	6.9	0.579±4	UJv	4.45	0±2.51	4.48	
LEAD-214	10	pCi/L	2.57±5.47	9.43	55.3±10.3	5.21	58.2±11.1	8.48	1.08±4.23	5.33	5.44±4.43	UJv	5.54	5.54			
PLUTONIUM-241	10	pCi/L	—	—	—	—	—	—	—	—	—	—	—	—	—		
POTASSIUM-40	100	pCi/L	14±52.6	UJv	47.1	38.8±34.8	J UJvp	19	18.3±33.3	UJv	36.3	30±15.7	UJv	32.2	33.1±16.9	UJv	34.9
RADIUM-226	1	pCi/L	0.462±0.429	UJv	0.614	—	—	—	—	0.91±0.515	J	0.205	0.752±0.483	J v	0.504	0.504	
SODIUM-22	10	pCi/L	0.376±2.64	5	-0.332±1.54	2.75	-0.293±2.41	3.89	-0.152±1.33	2.37	0.629±1.44	2.5	2.5				
STRONTIUM-90	1	pCi/L	-0.424±0.59	1.41	—	—	—	—	-0.0721±0.358	0.824	-0.246±0.42	0.986	0.986				
THALLIUM-208	5	pCi/L	2.11±4.58	UJv	4.53	1.64±1.59	UJv	2.97	1.47±3.29	UJv	4.44	1.11±1.4	2.57	1.57±2.76	UJv	2.9	
THORIUM-234	200	pCi/L	57.5±178	UJv	167	99.5±77.4	UJv	126	46±126	191	94.1±63.2	UJv	112	47.1±100	UJv	95.8	
TRITIUM	300	pCi/L	85.6±113	UJv	190	-63.3±105	187	72±128	217	78.3±115	194	17600±300	193	193			
URANIUM-235	25	pCi/L	5.56±15	26.3	1.54±13.9	17.2	1.49±14.6	25.5	8.5±8.98	UJv	15.7	5.16±9.1	15.9	15.9			
URANIUM-238	500	pCi/L	57.5±178	UJv	167	99.5±77.4	UJv	126	46±126	191	94.1±63.2	UJv	112	47.1±100	UJv	95.8	

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			UCD1-018		UCD1-019		UCD1-020		UCD1-020		UCD1-021		UCD1-022		
Sample ID			GWGW0617		GWGW0609		GWGW0612		GWGW0614		GWGW0613		GWGW0610		
Date			02/24/98		02/19/98		02/23/98		02/23/98		02/23/98		02/19/98		
QA									DUPLICATE						
Analyte	CRDL	Units	MDA		MDA		MDA		MDA		MDA		MDA		
ACTINIUM-228	20	pCi/L	7.47±7.52	15.2	6.76±6.33	UJv	12.1	0.906±13.2	16.9	6.54±5.74	UJv	11	7.03±11.2	UJv	11
AMERICIUM-241	1	pCi/L	--		--			--		--			0.00568±0.0289	0.0665	0.0195±0.0634
BISMUTH-212	70	pCi/L	11.5±18.5	34.3	-8.13±13	22.1	4.23±17.4	30.7	2.84±11.6	20.4	4.51±12.4	21.1	-5.27±18.6		32.3
BISMUTH-214	10	pCi/L	32.2±10.4	8.16	0±7.39	7.5	76.1±14.5	7.08	54.8±11.1	5.23	64.1±11	4.53	2.41±11.2	UJv	11.5
CARBON-14	20	pCi/L	1.28±5.25	9.02	--		1.48±5.22	8.95	0.295±5.15	8.91	-0.105±6.13	10.6	--		
CESIUM-137	10	pCi/L	0.312±2.36	4.21	0.877±1.79	3.31	-0.636±2.33	3.97	-1.09±1.58	2.58	0.617±1.54	2.81	-1.23±2.23		3.8
COBALT-60	10	pCi/L	1.51±2.19	4.4	0.723±2.31	UJv	2.96	1.88±2.25	4.36	0.15±1.94	3	0.753±1.32	2.61	1.68±2.62	5.22
GROSS ALPHA	2	pCi/L	2.01±1.02	Jv	1.28	7.47±1.91	2.22	1.83±0.645	0.779	0.957±0.46	Jv	0.629	4.22±1.3	1.43	4.11±1.33
GROSS BETA	3	pCi/L	1.08±0.728	UJv	1.42	2.92±1.45	Jv	2.48	0.555±0.769	UJv	1.3	1.16±0.512	Jv	2.36	1.45±1.33
LEAD-210	450	pCi/L	178±231	UJv	365	333±259	UJv	410	208±172	UJv	289	141±249	UJv	245	65.9±194
LEAD-212	10	pCi/L	2.24±5.41	UJv	7.01	0±6.06	UJv	4.93	0±4.66	7.12	0.655±4.38	4.5	1.18±4.39	UJv	4.2
LEAD-214	10	pCi/L	44.5±11.2	6.99	3.15±5.93	UJv	6.91	68±16.1	7.13	56.9±10.5	5.9	56±10.4	5.44	0±5.57	10.2
PLUTONIUM-241	10	pCi/L	--		--			--		--			-0.387±0.588	1	-0.991±1.73
POTASSIUM-40	100	pCi/L	4.91±61.9	UJv	42.8	11.2±41.7	UJv	27.2	48.5±25.6	UJv	51.4	2.63±23.3	UJv	30.6	80.1±59
RADIUM-226	1	pCi/L	--		--			0.231±0.272	UJv	0.43	0.088±0.211	0.409	0.223±0.308	UJv	0.517
SODIUM-22	10	pCi/L	0.56±1.83	3.6	0.00539±1.58	2.94	-0.535±2.13	3.77	0.196±1.48	2.68	0.777±1.52	2.92	0.741±2.43		4.72
STRONTIUM-90	1	pCi/L	--		--			-0.337±0.741	1.54	-0.0515±0.839	1.7	0.661±0.8	1.54	0.0563±0.362	0.805
THALLIUM-208	5	pCi/L	1.01±2.38	4.35	2.18±1.96	UJv	3.57	0±2.49	4.56	3.16±1.8	UJv	3.34	0.787±1.6	2.91	1.6±5.02
THORIUM-234	200	pCi/L	145±113	UJv	176	58.6±93.2	UJv	148	150±171	UJv	165	27.4±116	UJv	132	38.7±129
TRITIUM	300	pCi/L	70.9±126	214	40.4±118	200	-109±122	220	-108±120	216	-72.1±122	217	50±119		201
URANIUM-235	25	pCi/L	12.1±14.9	UJv	26.5	4.23±10.7	18.1	3.85±22.2	28.2	3.37±11.8	18.4	9.9±10.6	UJv	18.6	14.6±14.6
URANIUM-238	500	pCi/L	145±113	UJv	176	58.6±93.2	UJv	148	150±171	UJv	165	27.4±116	UJv	113	38.7±129

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-- = Not Analyzed.

**APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
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Location Sample ID Date QA			UCD1-023 GWGW0603 02/17/98			UCD1-024 GWGW0615 02/23/98			UCD1-025 GWGW0635 03/04/98			UCD1-02723 GWGW0619 02/25/98			UCD1-028 GWGW0628 03/03/98			UCD1-034 GWGW0621 03/02/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	5.69±17.7	UJv	18.6	2.5±10.8	UJv	11.1	5.7±5.35	UJv	10	—	—	—	8.6±5.8	UJv	9.48	4.9±4.6	UJv	9
AMERICIUM-241	1	pCi/L	—	—	—	—	—	—	—	—	—	—	—	-0.00427±0.0534	0.125	—	—	—	—	—
BISMUTH-212	70	pCi/L	17.2±18.5	UJv	35.3	14.4±10.8	UJv	20.8	4.57±10.9	19.7	—	—	—	24.6±14.7	Jv	17.2	5.41±9.84	17.9	17.9	17.9
BISMUTH-214	10	pCi/L	0±6.63	—	10.4	72.3±12.3	4.91	60.1±11.4	5.14	—	—	—	—	29.7±7.2	4.49	21.8±6.18	4.54	4.54	4.54	4.54
CARBON-14	20	pCi/L	65±7.39	—	9.55	2.66±5.44	9.25	6.19±5.54	UJv	9.21	-0.503±5.32	9.24	—	1.84±3.89	6.59	6.93±4.24	UJv	7	7	7
CESIUM-137	10	pCi/L	1.9±2.61	—	4.69	1.49±1.83	UJv	2.92	0.0399±1.56	2.43	—	—	—	0.855±3.06	UJv	2.37	-0.0788±1.43	2.48	2.48	2.48
COBALT-60	10	pCi/L	3.45±4.72	UJv	5.01	0.949±1.59	2.96	0.0751±1.34	2.48	—	—	—	—	0.522±1.24	2.39	0.403±1.34	2.49	2.49	2.49	2.49
GROSS ALPHA	2	pCi/L	1.54±0.678	—	0.858	2.57±1.13	Jv	1.49	5.42±1.28	1.3	—	—	—	4±1.51	1.97	1.84±0.873	UJvp	1.15	1.15	1.15
GROSS BETA	3	pCi/L	1.67±0.865	Jv	1.4	1.91±1.29	UJv	2.12	2.22±0.988	Jv	1.58	—	—	1.74±1.47	UJv	2.44	1.85±0.874	Jv	1.57	1.57
LEAD-210	450	pCi/L	54.1±646	UJv	686	157±255	UJv	242	136±175	UJv	263	—	—	0±28.7	44.9	148±264	UJv	222	222	222
LEAD-212	10	pCi/L	0±4.76	—	8.63	0.483±4.25	UJv	4.66	3.48±5.11	UJv	4.16	—	—	4.81±3.47	Jv	3.68	2.21±3.98	UJv	3.66	3.66
LEAD-214	10	pCi/L	3.95±5.18	—	9.25	65.7±11.8	5.41	62.6±10.5	5.18	—	—	—	—	34.3±7.48	4.34	19.8±6.05	4.83	4.83	4.83	4.83
PLUTONIUM-241	10	pCi/L	—	—	—	—	—	—	—	—	—	—	—	-1.23±1.53	2.6	—	—	—	—	—
POTASSIUM-40	100	pCi/L	33.8±31.5	UJv	62.1	30.9±17.5	UJv	35.4	23.1±19.4	UJv	23.7	—	—	38.9±32.4	Jv	21.6	6.58±35.2	UJv	25.7	25.7
RADIUM-226	1	pCi/L	0.609±0.44	Jv	0.499	0.862±0.44	Jv	0.445	0.213±0.187	Jv	0.115	—	—	0.38±0.319	UJv	0.4	0.429±0.297	Jv	0.145	0.145
SODIUM-22	10	pCi/L	2.89±2.14	UJv	4.47	0.153±1.35	2.44	-1.42±1.37	2.19	—	—	—	—	0.979±2.24	UJv	2.21	-0.485±1.31	2.28	2.28	2.28
STRONTIUM-90	1	pCi/L	-0.76±0.581	—	1.42	1.54±0.924	UJv	1.68	0.251±0.512	0.96	—	—	—	-0.0521±0.75	1.53	0.126±0.599	1.2	1.2	1.2	1.2
THALLIUM-208	5	pCi/L	0±2.87	—	5.36	1.8±1.7	UJv	3.04	1.55±2.26	UJv	2.76	—	—	0.784±2.71	UJv	2.75	0.0783±2.82	UJv	2.86	2.86
THORIUM-234	200	pCi/L	0±130	—	213	202±148	Jv	120	2.42±98.2	113	—	—	—	0±28.7	44.4	131±124	Jv	95.5	95.5	95.5
TRITIUM	300	pCi/L	44.4±116	—	197	0±119	207	-59.5±98.6	176	-92±100	181	—	—	-91.4±99.7	180	-123±99.7	182	182	182	182
URANIUM-235	25	pCi/L	15.8±23.1	UJv	29	1.07±21.4	UJv	21	11.3±11	UJv	19.1	—	—	14.2±11.9	UJv	15	4.89±9.41	16.3	16.3	16.3
URANIUM-238	500	pCi/L	0±130	—	213	202±148	Jv	120	2.42±98.2	113	—	—	—	0±28.7	44.4	131±124	Jv	95.5	95.5	95.5

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Location Sample ID Date QA			UCD2-007 GWGW0611 02/23/98			UCD2-014 GWGW0604 02/18/98			UCD2-015 GWGW0602 02/17/98			UCD2-016 GWGW0607 02/19/98			UCD2-017 GWGW0618 02/24/98			UCD2-026 GWGW0636 03/04/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA			MD		
ACTINIUM-228	20	pCi/L	3.88±9.55	UJv	9.31	3.7±5.12	9.44	1.06±17.4	19.5	7.14±4.89	UJv	9.66	10.1±26.9	UJv	14.8	6.52±5.39	UJv	10.3		
AMERICIUM-241	1	pCi/L	—			—		—		—			—			—				
BISMUTH-212	70	pCi/L	-8.01±9.89		16.2	0.452±9.98	17.7	27.3±22.4	UJv	34.2	3.86±9.36	17.6	15.2±15.9	31.2		-0.558±10.8		19.1		
BISMUTH-214	10	pCi/L	43.6±8.12		4.47	8.32±5.48	J Jv	4.34	6.6±5.56	UJv	10.2	0.0118±7.07	6.04	51±11.9	7.04	46±9.48	5.12			
CARBON-14	20	pCi/L	3.84±5.29	UJv	8.93	363±12.8	9.43	—		—		—	-0.21±5.23	9.07	8.51±8.84	UJv	14.8			
CESIUM-137	10	pCi/L	0±1.96		3.78	-0.365±1.31	2.26	0.385±2.45	4.35	2.53±1.92	J Jv	2.15	0.0739±2.21	3.83	-1.23±1.52	2.52				
COBALT-60	10	pCi/L	1.33±1.33		2.67	-0.249±1.39	2.5	-0.224±2.92	5.19	0.84±1.32		2.62	0.525±2.17	4.05	0.587±1.3	2.53				
GROSS ALPHA	2	pCi/L	2.33±0.627		0.665	3.61±0.989	0.956	1.85±1.01	Jv	1.55	2.36±0.857	1.03	2.38±1.04	Jv	1.39	1.58±0.898	UJvp	1.38		
GROSS BETA	3	pCi/L	1.19±0.543	J Jv	0.874	2.05±1.31	UJv	2.14	2.4±0.981	Jv	1.76	1.35±0.957	UJv	1.68	1.25±0.697	UJv	1.33	1.79±0.806	J Jv	1.3
LEAD-210	450	pCi/L	5.3±35	UJv	32.5	39.2±155	232	0±387	633	57.6±173		277	124±298	UJv	324	21.7±170	253			
LEAD-212	10	pCi/L	0±2.43		4.33	0±2.6	4.64	0±4.97	8.73	0±2.2		4.06	3.65±5.65	UJv	6.31	2.21±4.23	UJv	4.12		
LEAD-214	10	pCi/L	43.2±8.21		4.71	4.36±4.16	UJv	5.25	0±10.7	UJv	10.2	3.28±5.57	UJv	5.54	45.3±10.8	7.89	50.3±9.24		5.37	
PLUTONIUM-241	10	pCi/L	—			—		—		—			—			—				
POTASSIUM-40	100	pCi/L	27.5±16.6	UJv	33.4	35.5±21.2	J Jv	29.4	50.9±37.2	UJv	72.3	15.7±16	UJv	31.6	8.28±31.8	43.3	32.7±16.5	UJv	34.3	
RADIUM-226	1	pCi/L	0.307±0.317	UJv	0.475	0.501±0.465	UJv	0.666	0.586±0.537	UJv	0.79	0.592±0.459	J Jv	0.546	—	0.614±0.358	J Jv	0.348		
SODIUM-22	10	pCi/L	0.0521±1.28		2.37	0.136±1.47	2.7	2.93±2.84	UJv	4.48	0.173±1.24	2.26	-0.0797±1.95	3.55	-0.0862±1.54	2.8				
STRONTIUM-90	1	pCi/L	-0.123±0.728		1.49	0.00937±0.3	0.675	-0.233±0.527	1.23	0.0359±0.356	0.797	—			-0.28±0.547	1.09				
THALLIUM-208	5	pCi/L	1.33±1.46	UJv	2.71	1.05±1.94	UJv	2.75	3.29±6.98	UJv	5.53	0.293±2.85	UJv	2.23	1.21±2.37	4.26	2.33±3.79	UJv	3.19	
THORIUM-234	200	pCi/L	45.3±55.1	J Jv	38.8	35.6±101	UJv	96.7	86.5±189	UJv	168	2.41±80.8	122	0±190	194	104±93.3	UJv	105		
TRITIUM	300	pCi/L	-111±125		224	1640±138	188	67.8±121	204	31.3±111		189	-71.1±121	215	-60.1±99.5	177				
URANIUM-235	25	pCi/L	8.3±8.57	UJv	15	6.15±10.3	UJv	16.2	8.75±20.6	UJv	27.7	0.437±8.59	13.9	-11.3±23.5	25.7	1.91±10	17.3			
URANIUM-238	500	pCi/L	45.3±55.1	Jv	38.8	35.6±101	UJv	96.7	86.5±189	UJv	168	2.41±80.8	103	236±190	Jv	165	104±93.3	UJv	105	

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Location Sample ID Date QA			UCD2-027Z5 GWGW0620 02/25/98	UCD2-029 GWGW0629 03/03/98	UCD2-030 GWGW0630 03/03/98	UCD2-030 GWGW0631 03/03/98 DUPLICATE	UCD2-031 GWGW0634 03/04/98	UCD2-032 GWGW0626 03/03/98
Analyte	CRDL	Units	MDA	MDA	MDA	MDA	MDA	MDA
ACTINIUM-228	20	pCi/L	--	0±8.25	1.31±4.83	4.58±6.02	1.82±7.88	4.23±4.79
AMERICIUM-241	1	pCi/L	--	0.0447±0.0563 UJv	0.0509±0.0633 UJv	0.00394±0.0582	0.00339±0.0596	--
BISMUTH-212	70	pCi/L	--	0±23.8	7.09±11	2.65±13.9	3.04±10.6	6.46±9.96
BISMUTH-214	10	pCi/L	--	26.4±10.2	20.6±6.16	20.6±8.4	46±8.8	29.3±7.33
CARBON-14	20	pCi/L	-2.72±5.35	17±4.23 J	14.9±4.17 J	16.4±4.64 J	7.66±5.5 UJv	11.7±4.07 J
CESIUM-137	10	pCi/L	--	-0.517±2.05	-0.835±1.33	0.217±1.87	0.332±1.59 UJv	-0.148±1.58
COBALT-60	10	pCi/L	--	-1.01±2.05	0.783±1.3	0.162±2.13	-0.521±1.35	0.271±1.38
GROSS ALPHA	2	pCi/L	--	1.67±0.967 UJvp	2.32±0.855 Up	1.31±0.793 J UJvp	2±0.942 UJvp	2.17±1.01 UJvp
GROSS BETA	3	pCi/L	--	1.21±0.816 UJv	1.9±0.81 J v	0.708±0.845	1.76±0.873 J v	0.45±0.835
LEAD-210	450	pCi/L	--	169±177 UJv	132±271 UJv	200±428 UJv	191±161 UJv	228±150 UJv
LEAD-212	10	pCi/L	--	0±4.1	1.47±3.96 UJv	0.513±4.31 UJv	1.48±4.26 UJv	0±3.03
LEAD-214	10	pCi/L	--	25.1±9.95	13.5±5.36	24±8.16	48.7±8.85	25.3±6.69
PLUTONIUM-241	10	pCi/L	--	-0.214±0.563	-0.167±0.631	0.362±0.566	-0.415±0.547	--
POTASSIUM-40	100	pCi/L	--	0±28.2	17.7±16.7 UJv	20.8±20 UJv	7.88±24.7 UJv	23.5±17.5 UJv
RADIUM-226	1	pCi/L	--	0.554±0.343 J	0.401±0.372 UJv	0.312±0.249 J v	0.648±0.367 J	0.333±0.308 UJv
SODIUM-22	10	pCi/L	--	-2.64±2.1	0.465±1.22	-1.54±1.96	0.647±1.39	-0.268±1.5
STRONTIUM-90	1	pCi/L	--	-0.0452±0.784	0.26±0.812	0.326±0.614	-0.345±0.626	0.232±0.738
THALLIUM-208	5	pCi/L	--	0.597±4.71 UJv	2.13±1.49	1.63±1.97 UJv	2.21±1.61 UJv	1.55±1.57 UJv
THORIUM-234	200	pCi/L	--	0±127	85.2±109 UJv	47.6±86.2	25.4±115 UJv	30.7±118 UJv
TRITIUM	300	pCi/L	31.4±108	31.3±108	-59.4±98.4	30.1±103	-90.6±98.8	30.7±105
URANIUM-235	25	pCi/L	--	21.5±16.8 UJv	6.8±14.2 UJv	3.74±10.7	0±22.7 UJv	15.9±17.3 UJv
URANIUM-238	500	pCi/L	--	0±127	85.2±109 UJv	47.6±86.2	25.4±115 UJv	30.7±118 UJv

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Location			UCD2-035				UCD2-036				UCD2-037				UCD2-038				UCD2-039				UCD2-040			
Sample ID			GWGW0622				GWGW0625				GWGW0637				GWGW0623				GWGW0638				GWGW0633			
Date			03/02/98				03/02/98				03/05/98				03/02/98				03/05/98				03/04/98			
QA																										
Analyte		CRDL	Units	MDA		MDA		MDA		MDA		MDA		MDA		MDA		MDA		MDA						
ACTINIUM-228	20	pCi/L	8.84±5.08	UJv	10.1	8.44±6.59	UJv	12.7	5.77±9.49	UJv	9.74	3.02±9.92		15.2	7.25±5.35	UJv	10.3	3.6±2.17	UJv	4.16						
AMERICIUM-241	1	pCi/L	--			-0.011±0.0468		0.116	0.00754±0.0406		0.0812	0.0149±0.0511	0.111	0.0375±0.0313	UJv	0.0486	0.0116±0.0298		0.0621							
BISMUTH-212	70	pCi/L	-0.917±9.98		17.9	4.66±17.9		25.4	-0.768±10.2		18.3	19.3±16.2	UJv	30.2	-3.33±10.3		17.8	2.89±4.07		7.57						
BISMUTH-214	10	pCi/L	15.9±6.93		4.43	35.1±10.2		5.27	55.7±10.8		4.79	26.1±10.5		6.92	55.3±10.6		4.61	12.1±2.82		1.6						
CARBON-14	20	pCi/L	2.95±4.01	UJv	6.75	0.99±3.8		6.48	-1.78±4.21		7.3	0.855±3.83		6.53	11.9±4.23	J	6.77	11.9±5.59	J Jv	8.97						
CESIUM-137	10	pCi/L	1.57±2.58	UJv	2.44	0.417±1.78		3.24	0.32±1.53		2.5	-1.91±2.62		3.65	0.967±1.48		2.74	0±1.05		1.91						
COBALT-60	10	pCi/L	-0.0609±1.29		2.12	1.01±1.54		3.07	-0.252±1.44		2.61	-1.04±2.23		3.83	0.835±1.4		2.73	0.22±0.66		1.19						
GROSS ALPHA	2	pCi/L	2.68±1.19	Jv	1.87	2.73±0.953		0.987	2.01±0.974	UJvp	1.39	1.94±0.73	Up	0.708	1.45±0.826	J UJvp	1.21	3.73±1.08		0.877						
GROSS BETA	3	pCi/L	2.38±0.924	Jv	1.62	1.41±0.847	UJv	1.56	2.16±0.985	Jv	1.77	1.75±0.861	J Jv	1.56	1.66±0.921	UJv	1.69	2.12±0.888	Jv	1.57						
LEAD-210	450	pCi/L	112±342	UJv	288	219±273	UJv	437	231±205	UJv	325	100±174	UJv	267	405±246	UJvp	261	27±198	UJv	206						
LEAD-212	10	pCi/L	1.01±3.2	UJv	3.53	2.95±2.86	UJv	5.16	0±2.46		4.51	1.01±6.25	UJv	7.13	3.61±4.15	UJv	3.88	0.678±1.05		1.81						
LEAD-214	10	pCi/L	16±6.07		4.51	0±7.4		9.22	65±10		4.71	18.9±8.69		7.06	43.7±9.37		4.85	11.8±2.7		1.93						
PLUTONIUM-241	10	pCi/L	--			-0.217±0.544		1.07	0.626±0.525	UJv	1.06	-0.149±0.588		0.997	0.344±0.586		1.19	-0.0983±0.565		1.22						
POTASSIUM-40	100	pCi/L	13.3±14.1		28.3	47.5±35.8	J UJvp	28.6	22.7±31.4	UJv	25.4	3.91±39.1	UJv	38	8.51±31.6	UJv	27	0±7.32		15.1						
RADIUM-226	1	pCi/L	0.654±0.451	J UJv	0.553	0.232±0.322	UJv	0.54	0.546±0.394	J UJvp	0.447	0.22±0.264	UJv	0.405	0.364±0.336	UJv	0.447	0.243±0.213	J Jv	0.132						
SODIUM-22	10	pCi/L	0.463±1.32		2.45	-0.017±1.7		3.14	0.212±1.41		2.53	1.98±2		3.98	0.532±1.35		2.59	-0.597±0.549		0.825						
STRONTIUM-90	1	pCi/L	0.239±0.784		1.56	0.909±0.825	UJv	1.56	-0.0583±0.532		1.04	0.191±0.745		1.48	-0.0954±0.619		1.21	-0.0831±0.511		1						
THALLIUM-208	5	pCi/L	1.34±1.38	UJv	2.64	0.271±3.85	UJv	3.63	1.74±1.49	UJv	2.85	4.24±2.35	UJv	4.33	0.843±3.02	UJv	2.85	0.241±0.978	UJv	1.14						
THORIUM-234	200	pCi/L	12±98.8	UJv	106	79.1±87.1	UJv	153	30±74.4		126	42.6±139	UJv	152	0±164	UJv	112	28.9±26.9	UJv	44						
TRITIUM	300	pCi/L	-93.7±102		184	-59.5±98.6		176	-62±103		183	-31.4±105		185	-94.7±103		186	0±103		180						
URANIUM-235	25	pCi/L	5.2±9.18		15.1	3.81±11.2		19	7.42±9.9	UJv	16.3	14.2±25.1	UJv	25.5	5.46±10		17.5	-0.255±3.56		6.14						
URANIUM-238	500	pCi/L	12±98.8	UJv	106	79.1±87.1	UJv	153	30±74.4		126	42.6±139	UJv	152	0±164	UJv	112	28.9±26.9	UJv	44						

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**APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD4-041 GWGW0632 03/04/98		UCD4-042 GWGW0639 03/05/98		UCD4-043 GWGW0627 03/03/98				
Analyte	CRDL	Units	MDA		MDA		MDA				
ACTINIUM-228	20	pCi/L	3.62±11.1	UJv	11	0.325±11.1	UJv	10.9	9.47±5.43	UJv	10.6
AMERICIUM-241	1	pCi/L	0.0122±0.0611		0.135	-0.00725±0.0293		0.0656	-0.00721±0.0387		0.0983
BISMUTH-212	70	pCi/L	6.74±10.5		19.2	0.888±9.92		17.8	1.71±10.3		18.3
BISMUTH-214	10	pCi/L	40.2±8.91		4.91	20±6.7		5.35	23.1±7.04		4.54
CARBON-14	20	pCi/L	9.99±5.81	JJv	9.46	1.52±9.7		16.6	3.37±3.99	UJv	6.7
CAESIUM-137	10	pCi/L	-0.304±1.59		2.72	0±2.69	UJv	2.43	0.862±1.39		2.56
COBALT-60	10	pCi/L	1.18±1.67		3.14	-0.373±1.36		2.44	0.4±1.26		2.4
GROSS ALPHA	2	pCi/L	1.42±0.809	J UJvp	1.15	2.11±0.945	UJvp	1.21	2.03±1.1	UJv	1.78
GROSS BETA	3	pCi/L	1.81±0.924	JJv	1.69	3.51±1.07		1.84	0.555±0.911		1.79
LEAD-210	450	pCi/L	59.3±162		247	42.3±164		269	32.9±268	UJv	217
LEAD-212	10	pCi/L	0±2.76		4.87	1.21±3.85	UJv	4.08	0.753±4.22	UJv	4.01
LEAD-214	10	pCi/L	38.3±7.34		5.67	14.7±7		4.79	26.6±7.1		4.77
PLUTONIUM-241	10	pCi/L	0.099±0.531		1.09	0.28±0.518		1.05	-0.394±0.596		1.18
POTASSIUM-40	100	pCi/L	22.3±24.7	UJv	23.8	17.4±26.9	UJv	25.7	17.9±13.8	UJv	25
RADIUM-226	1	pCi/L	0.437±0.324	JJv	0.169	0.42±0.311	J UJv	0.163	0.557±0.437	UJv	0.601
SODIUM-22	10	pCi/L	-0.89±1.54		2.58	0.367±1.22		2.36	0.275±1.38		2.57
STRONTIUM-90	1	pCi/L	0.137±0.518		0.987	-0.191±0.732		1.43	0.442±0.806		1.58
THALLIUM-208	5	pCi/L	2.25±1.7	UJv	3.13	0.0956±2.63		2.82	1.97±2.32	UJv	2.94
THORIUM-234	200	pCi/L	108±75	UJv	122	57.2±69.7	UJv	114	109±71.3	UJv	115
TRITIUM	300	pCi/L	-59.2±98.1		175	-31.4±105		185	-93.1±102		183
URANIUM-235	25	pCi/L	13.7±10.4	UJv	18.2	8.24±9.62	UJv	16.9	0.416±10.3		17.7
URANIUM-238	500	pCi/L	108±75	UJv	122	57.2±69.7	UJv	114	109±71.3	UJv	115

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RADIONUCLIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-004 GWGW0640 05/26/98			UCD1-012 GWGW0641 05/26/98			UCD1-013 GWGW0642 05/26/98			UCD1-023 GWGW0656 06/04/98			UCD1-024 GWGW0649 05/27/98			UCD1-025 GWGW0647 05/27/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	6.92±6.82	UJv	12.8	9.96±8.25	UJv	15.3	0±13		16.4	--			--			--		
AMERICIUM-241	1	pCi/L	--			--			--			--			--			--		
BISMUTH-212	70	pCi/L	38±23.1	Jv	24.2	12.2±15.2		28.1	2.38±16.3		28.5	--			--			--		
BISMUTH-214	10	pCi/L	33.7±9.55	UJpd	6.29	69.2±13	Jd	7.2	93.9±16.1	Jd	7.25	--			--			--		
CARBON-14	20	pCi/L	--			277±8.81		7.15	1390±28.2		11.5	49.5±7.11	9.71		7.27±3.72	J Jv	6.07	10.5±4.05	J Jv	6.49
CESIUM-137	10	pCi/L	2.21±1.79	UJv	3.44	-0.795±2.34		3.84	1.12±2.12		3.8	--			--			--		
COBALT-60	10	pCi/L	1.72±2.57	UJv	3.73	0.475±2.28		4.05	0.466±2.22		4.08	--			--			--		
GROSS ALPHA	2	pCi/L	1.74±0.817	Jv	1.1	6.36±1.63		1.97	4.33±1.62		2.25	--			--			--		
GROSS BETA	3	pCi/L	0.853±1.31		2.22	1.84±1.36	UJv	2.25	2.99±1.5	Jv	2.43	--			--			--		
LEAD-210	450	pCi/L	415±701	UJv	1110	411±355	UJv	563	210±479	UJv	496	--			--			--		
LEAD-212	10	pCi/L	3.19±4.95	UJv	4.93	7.1±5.64	J Jv	5.84	8.18±6.3	J Jv	5.7	--			--			--		
LEAD-214	10	pCi/L	31.9±7.97	Jd	6.18	73.3±14	Jd	7.2	95±16.1	Jd	7.48	--			--			--		
PLUTONIUM-241	10	pCi/L	--			--			--			--			--			--		
POTASSIUM-40	100	pCi/L	33.7±25.2	UJv	49.4	14.5±54	UJv	38.9	48.9±27.3	UJv	54.2	--			--			--		
RADIUM-226	1	pCi/L	0.342±0.402	UJv	0.636	0.285±0.394	UJv	0.662	0.498±0.462	UJv	0.661	--			--			--		
SODIUM-22	10	pCi/L	-3.37±2.5		3.22	0.492±2.27		4.04	0.972±2.96	UJv	3.6	--			--			--		
STRONTIUM-90	1	pCi/L	0.217±0.257		0.515	0.559±0.36	UJv	0.686	1.07±0.355		0.53	--			--			--		
THALLIUM-208	5	pCi/L	1.5±3.19	UJv	3.82	0.95±2.4		4.12	3.08±2.19	UJv	4.06	--			--			--		
THORIUM-234	200	pCi/L	11±225	UJv	217	45.1±162	UJv	179	145±91.1	UJv	159	--			--			--		
TRITIUM	300	pCi/L	0±121		211	-63.5±114		203	15700±433		218	--			--			-32.3±117		207
URANIUM-235	25	pCi/L	13±18.2	UJv	20	8.45±24.8	UJv	25.5	11.4±15.6	UJv	23.7	--			--			--		
URANIUM-238	500	pCi/L	11±225	UJv	197	45.1±162	UJv	151	145±91.1	UJv	159	--			--			--		

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APPENDIX B
RADIONUCLIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-028 GWGW0660 06/03/98		UCD2-014 GWGW0643 05/26/98			UCD2-015 GWGW0644 05/26/98			UCD2-026 GWGW0648 05/27/98			UCD2-029 GWGW0661 06/03/98			UCD2-030 GWGW0652 06/01/98		
Analyte	CRDL	Units	MDA		MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	0±5.39	8.81	10.3±14.6	UJv	16.2	0±11.3	15.3	—	—	—	3.51±4.71	8.28	6.36±7.05	UJv	8.58		
AMERICIUM-241	1	pCi/L	0.0137±0.0121	0.0274	—	—	—	—	—	—	—	—	0.396±0.143	0.17	0.0149±0.0193	—	0.0479		
BISMUTH-212	70	pCi/L	0.681±10.1	17.8	9.75±16.7	—	30.1	0.674±15.8	27.4	—	—	—	6.48±9.16	16.3	9.54±9.12	UJv	16.8		
BISMUTH-214	10	pCi/L	229±38.3	4.5	67.7±12.8	Jd	7.28	24.3±9.67	UJdp	5.93	—	—	111±16.3	4.07	81.1±14.3	—	4.21		
CARBON-14	20	pCi/L	1.53±5.34	9.14	684±14.4	—	7.68	—	—	—	7.51±3.87	J Jv	6.32	14.1±6.19	J Jv	9.9	5.9±3.68	UJv	6.06
CESIUM-137	10	pCi/L	-0.256±1.49	2.29	-2.5±2.13	—	3.42	0.177±1.99	3.5	—	—	—	0.654±1.26	1.99	-0.924±1.44	—	1.98		
COBALT-60	10	pCi/L	0.082±1.25	2.25	0.994±2.05	—	3.93	1.32±1.86	3.66	—	—	—	-0.0735±1.12	1.96	1.8±1.84	UJv	2.03		
GROSS ALPHA	2	pCi/L	4.17±1.47	1.87	3.6±1.49	Jv	2.14	2.34±0.919	1.23	—	—	—	1.98±0.56	0.527	3.55±0.798	—	0.88		
GROSS BETA	3	pCi/L	0.45±1.34	2.28	1.26±1.58	UJv	2.65	0.47±1.34	2.28	—	—	—	1.19±0.672	J Jv	1.09	1.04±0.665	UJv	1.09	
LEAD-210	450	pCi/L	123±339	528	157±580	UJv	495	402±550	UJv	434	—	—	-103±156	222	230±150	UJv	246		
LEAD-212	10	pCi/L	2.47±3.97	UJv	3.75	3.85±6.7	UJv	6.77	3.65±6.27	UJv	6.22	—	2.55±3.76	UJv	3.57	2.05±4.15	UJv	3.59	
LEAD-214	10	pCi/L	240±30.1	4.99	80.5±15.7	Jd	7.39	20.7±9.96	Jd	7.2	—	—	102±14.2	4.26	89.7±12.5	—	4.41		
PLUTONIUM-241	10	pCi/L	-0.991±1.1	1.88	—	—	—	—	—	—	—	—	-0.284±0.561	0.954	0.278±0.488	—	0.823		
POTASSIUM-40	100	pCi/L	14.2±14	UJv	26.3	0±30.6	61.6	29.7±44.4	UJv	36.7	—	—	1.68±21.6	UJv	21.2	8.97±25.2	UJv	18.9	
RADIUM-226	1	pCi/L	0.323±0.365	UJv	0.58	0.491±0.456	UJv	0.652	0.282±0.39	UJv	0.655	—	0.202±0.28	UJv	0.47	0.596±0.383	J Jv	0.399	
SODIUM-22	10	pCi/L	0.508±1.37	2.24	1.52±2.23	—	4.28	1.28±1.97	3.81	—	—	—	-0.715±1.16	1.94	0.532±1.43	—	2.21		
STRONTIUM-90	1	pCi/L	-0.2±0.363	0.696	0.011±0.304	—	0.644	0.167±0.352	0.724	—	—	—	0.282±0.398	0.722	-0.198±0.337	—	0.742		
THALLIUM-208	5	pCi/L	0.206±2.14	2.65	0.703±4.29	UJv	4.49	0±2.33	4.37	—	—	—	1.38±1.26	UJv	2.28	0.294±3.56	UJv	2.61	
THORIUM-234	200	pCi/L	67.2±96.6	UJv	161	74±85.5	UJv	151	9.62±176	UJv	150	—	54.3±63.4	UJv	102	0±70.8	—	117	
TRITIUM	300	pCi/L	-29.9±103	182	3630±236	—	219	-66.5±119	212	-92.5±109	197	—	28.9±102	176	32.1±119	—	205		
URANIUM-235	25	pCi/L	9.51±10.4	UJv	16.7	2.15±13.4	22.9	15.6±16.5	UJv	22.2	—	—	2.53±8.61	14.8	0.407±10.6	—	15.6		
URANIUM-238	500	pCi/L	67.2±96.6	UJv	161	74±85.5	UJv	151	9.62±176	UJv	129	—	54.3±63.4	UJv	102	0±70.8	—	117	

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RADIONUCLIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD2-031 GWGW0653 06/01/98		UCD2-032 GWGW0657 06/02/98		UCD2-035 GWGW0663 06/03/98		UCD2-036 GWGW0662 06/04/98		UCD2-037 GWGW0664 06/04/98	
Analyte	CRDL	Units	MDA		MDA		MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	1.44±4.67	8.08	1.71±7.93	UJv 7.73	--	--	4.49±3.94	UJv 7.21	6.52±9.07	UJv 8.89
AMERICIUM-241	1	pCi/L	-0.00287±0.0103	0.0404	--	--	--	--	0.00165±0.00423	0.0477	-0.00935±2.3	0.0688
BISMUTH-212	70	pCi/L	4.34±9.34	16.5	8.94±7.99	UJv 15	--	--	2.02±9.1	15.8	5.36±9.41	16.9
BISMUTH-214	10	pCi/L	86.5±13.3	3.9	53.3±11.4	3.9	--	--	73.6±11.6	3.65	72.9±13.7	4.37
CARBON-14	20	pCi/L	4.73±3.59	UJv 5.97	4.39±3.7	UJv 6.16	1.73±5.42	9.28	-0.453±5.25	9.11	6.06±5.74	UJv 9.57
CESIUM-137	10	pCi/L	-0.451±1.35	2.28	0.12±1.15	2.02	--	--	-0.184±1.21	2.06	-1.44±1.26	2.01
COBALT-60	10	pCi/L	0.618±1.19	2.21	0.289±1.15	2.11	--	--	-0.0794±1.1	1.93	0.561±1.18	2.21
GROSS ALPHA	2	pCi/L	2.35±0.608	0.563	2.05±0.759	1.01	--	--	1.45±0.692	J Jv 1.01	1.4±0.739	J Jv 1.12
GROSS BETA	3	pCi/L	1.13±0.659	J Jv 1.07	1.09±0.641	J Jv 1.04	--	--	0.957±0.718	UJv 1.19	1.1±0.685	UJv 1.12
LEAD-210	450	pCi/L	169±279	UJv 186	209±199	UJv 295	--	--	111±144	UJv 217	12.5±185	209
LEAD-212	10	pCi/L	2.03±3.46	UJv 3.59	3.34±4.02	J Jv 3.17	--	--	2.12±3.45	UJv 3.19	2.29±3.98	UJv 3.56
LEAD-214	10	pCi/L	82.2±11.3	4.61	55.8±9.36	4.14	--	--	73.7±10.9	4.12	76.3±11.6	4.86
PLUTONIUM-241	10	pCi/L	-0.316±0.625	1.06	--	--	--	--	-0.111±0.809	1.37	-0.282±0.556	0.946
POTASSIUM-40	100	pCi/L	20.6±14.1	UJv 27.1	4.77±12.5	22.8	--	--	27.4±14.6	UJv 28	0±15.1	30.2
RADIUM-226	1	pCi/L	0.437±0.371	UJv 0.508	0.521±0.354	J Jv 0.384	--	--	0.204±0.245	UJv 0.376	0.202±0.28	UJv 0.47
SODIUM-22	10	pCi/L	0.303±1.1	2.02	-0.511±1.14	1.98	--	--	-0.428±1.14	1.96	0.153±1.16	2.11
STRONTIUM-90	1	pCi/L	-0.362±0.346	0.777	0.652±0.372	UJv 0.695	--	--	-0.116±0.398	0.75	0.111±0.424	0.782
THALLIUM-208	5	pCi/L	0.766±1.31	2.33	0.623±2.24	UJv 2.05	--	--	2.19±2.65	J Jv 1.98	2.37±1.42	UJv 2.59
THORIUM-234	200	pCi/L	10±99.9	UJv 99.4	65±104	UJv 113	--	--	3.71±91.4	103	35.3±95.5	UJv 103
TRITIUM	300	pCi/L	0±123	214	70.7±133	226	0±103	179	58.7±105	179	-28.8±99.1	175
URANIUM-235	25	pCi/L	1.87±9.18	15.7	1.47±10.3	13.6	--	--	8.9±8.4	UJv 14.5	9.47±9.69	UJv 15.1
URANIUM-238	500	pCi/L	10±99.9	UJv 99.4	65±104	UJv 98.9	--	--	3.71±91.4	96	35.3±95.5	UJv 91.9

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Location Sample ID Date QA			UCD2-038 GWGW0665 06/03/98			UCD2-039 GWGW0658 06/03/98			UCD2-040 GWGW0654 06/01/98			UCD4-041 GWGW0651 06/01/98			UCD4-042 GWGW0655 06/02/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	3.91±7.76	UJv	8.52	7.47±6.72	UJv	12.3	1.5±7.48	UJv	8.61	1.35±8.02	UJv	9	3.93±8.51	UJv	8.82
AMERICIUM-241	1	pCi/L	0.0455±0.0258	JJv	0.0352	0.0907±0.0439	JJv	0.0549	0.0325±0.0252	UJv	0.0409	0.027±0.0326		0.0695	0.0166±0.0169		0.0378
BISMUTH-212	70	pCi/L	12.4±17.2	UJv	15.5	10.5±14.9		26	1.54±8.98		15.8	7.92±9.58	UJv	17.1	9.5±9.11	UJv	16.5
BISMUTH-214	10	pCi/L	103±17.6		4.2	213±29		5.63	91±16		3.92	71.5±12.9		4.21	152±21.3		4.16
CARBON-14	20	pCi/L	2.29±5.41		9.22	15.4±6.01	JJv	9.52	11.3±3.78	JJ	6	11.3±5.21	JJv	9.51	8.54±4.14	JJv	6.73
CESIUM-137	10	pCi/L	-0.104±1.41		2.15	2.16±2.13	UJv	3.35	-0.187±1.32		2.28	-0.546±1.32		2.2	0.289±1.45		2.21
COBALT-60	10	pCi/L	0.455±1.18		2.2	1.08±1.76		3.18	-0.0428±1.17		2.11	0.389±1.3		2.33	1.49±1.36	UJv	2.56
GROSS ALPHA	2	pCi/L	2.08±0.64		0.754	1.74±0.617		0.766	2.41±0.74		0.897	2.34±0.652		0.707	2.39±0.748		0.925
GROSS BETA	3	pCi/L	0.542±0.677	UJv	1.14	0.507±0.683	UJv	1.15	1.08±0.648	JJv	1.06	1.12±0.633	JJv	1.03	1.39±0.684	JJv	1.1
LEAD-210	450	pCi/L	66.5±213	UJv	214	206±320	UJv	471	63.3±210	UJv	209	65.1±164		249	201±167	UJv	247
LEAD-212	10	pCi/L	2.74±3.82	UJv	3.61	0.934±5.97	UJv	5.19	0.804±3.31	UJv	3.63	1.61±3.32	UJv	3.41	0.832±3.31	UJv	3.63
LEAD-214	10	pCi/L	106±15.3		4.46	209±26.5		6.74	94±14		4.56	72±10.8		4.24	147±19.6		4.62
PLUTONIUM-241	10	pCi/L	0.276±0.504		0.85	0.129±0.624		1.06	-0.528±0.882		1.5	0.291±0.51		0.86	0.88±0.791	UJv	1.33
POTASSIUM-40	100	pCi/L	0±14.4		28.8	0±22.1		41.4	23.9±31.3	JJv	21.9	13±13.3	UJv	24.7	28.3±14.7	UJv	28.3
RADIUM-226	1	pCi/L	0.275±0.285	UJv	0.406	0.362±0.336	UJv	0.48	0.431±0.334	JJv	0.397	0.364±0.338	UJv	0.484	0.163±0.319	UJv	0.585
SODIUM-22	10	pCi/L	0.603±1.21		2.25	-1.35±1.95		3.2	0.274±1.19		2.19	-0.278±1.27		2.19	-0.543±1.38		2.01
STRONTIUM-90	1	pCi/L	-0.0556±0.348		0.656	-0.356±0.371		0.726	0.0361±0.361		0.758	0.0687±0.329		0.688	0.126±0.359		0.743
THALLIUM-208	5	pCi/L	0.667±1.33		2.38	1.45±3.21	UJv	3.55	0.825±2.68	UJv	2.65	0.974±2.22	UJv	2.68	-0.112±1.42		2.42
THORIUM-234	200	pCi/L	69.7±107	UJv	96.4	144±125	UJv	182	12.1±92.6	UJv	103	85±69.2	UJv	112	113±77.3	UJv	114
TRITIUM	300	pCi/L	-58.2±98.8		177	89.1±108	UJv	181	32.8±122		210	-30.1±109		192	-64.2±115		205
URANIUM-235	25	pCi/L	6.83±11.8	UJv	15.7	8.97±15.1	UJv	22.8	4.62±9.3		15.9	0.882±15.5	UJv	15.4	3.48±9.39		16.1
URANIUM-238	500	pCi/L	69.7±107	UJv	96.4	144±125	UJv	182	12.1±92.6	UJv	92.2	85±69.2	UJv	112	113±77.3	UJv	114

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
RADIONUCLIDES
SPRING QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location	UCD4-043		
		Sample ID	GWGW0659		
		Date	06/02/98		
		QA			
Analyte	CRDL	Units	MDA		
ACTINIUM-228	20	pCi/L	1.14±8.57	UJv	8.31
AMERICIUM-241	1	pCi/L	0.057±0.037	JJv	0.0453
BISMUTH-212	70	pCi/L	-0.431±8.91		15.5
BISMUTH-214	10	pCi/L	79.2±12.6		4.33
CARBON-14	20	pCi/L	5.28±3.85	UJv	6.39
CESIUM-137	10	pCi/L	1.22±1.34	UJv	2.32
COBALT-60	10	pCi/L	1.15±1.22		2.37
GROSS ALPHA	2	pCi/L	4.37±1.01		1.19
GROSS BETA	3	pCi/L	2.64±0.802		1.25
LEAD-210	450	pCi/L	142±163	UJv	242
LEAD-212	10	pCi/L	2.2±3.25	UJv	3.45
LEAD-214	10	pCi/L	84.6±12.1		4.27
PLUTONIUM-241	10	pCi/L	0.474±0.579	UJv	0.973
POTASSIUM-40	100	pCi/L	6.93±24.8	UJv	22.7
RADIUM-226	1	pCi/L	0.685±0.4	JJv	0.388
SODIUM-22	10	pCi/L	0.541±1.73	UJv	2.12
STRONTIUM-90	1	pCi/L	-0.226±0.357		0.793
THALLIUM-208	5	pCi/L	2.04±1.34	UJv	2.48
THORIUM-234	200	pCi/L	79.2±65.6	UJv	105
TRITIUM	300	pCi/L	67.3±126		215
URANIUM-235	25	pCi/L	1.65±9.63		14.8
URANIUM-238	500	pCi/L	79.2±65.6	UJv	105

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**APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-012 GWGW0701 08/26/98		UCD1-013 GWGW0694 08/26/98		UCD1-013 GWGW0695 08/26/98 DUPLICATE			UCD1-018 GWGW0689 08/24/98		UCD1-020 GWGW0702 08/26/98		UCD1-022 GWGW0690 08/24/98				
Analyte	CRDL	Units	MDA		MDA		MDA			MDA		MDA		MDA				
ACTINIUM-228	20	pCi/L	9.6±9.24	UJv	9.78	0±8.26	9.52	7.06±5.09	UJv	9.2	—	—	2.28±4.68	8.43	9.08±14.5	UJv	19.1	
AMERICIUM-241	1	pCi/L	—			—		—			—	—	—		0.0423±0.0426	UJv	0.0456	
BISMUTH-212	70	pCi/L	10.7±9.86	UJv	18.8	1.42±10.4	18.7	4.94±9.91		18.4	—	6.76±9.96	18.4	—	21.9±20.6	UJv	38.8	
BISMUTH-214	10	pCi/L	0±3.32		6.16	1.61±5.13	UJv	5.67	1.63±6.13	UJv	5.27	—	0±5.59	6.02	2.38±9.98	UJv	10.9	
CARBON-14	20	pCi/L	318±13.2		10.5	1370±33		17.5	1440±29.3	12	-0.898±5.36	9.34	-5.65±5.56	9.97	—			
CESIUM-137	10	pCi/L	3.3±3.55	Jv	2.13	-0.712±1.36	2.31	0.709±1.42	2.5	—	—	2.19±1.9	UJv	2.33	0.821±2.73		4.9	
COBALT-60	10	pCi/L	0.595±1.28		2.23	-0.391±1.2	2.15	1.38±1.28	UJv	2.53	—	1.16±1.19	2.4	—	0.607±2.75		5.17	
GROSS ALPHA	2	pCi/L	1.92±0.866		0.999	1.75±0.889	Jv	1.33	1.41±0.739	Jv	0.933	—	0.597±0.725	1.45	1.53±0.739	Jv	0.918	
GROSS BETA	3	pCi/L	1.13±0.632	UJv	1.22	1.79±0.665	Jv	1.2	0.669±0.62	UJv	1.28	—	0.644±0.647	1.34	0.953±0.557	UJv	1.08	
LEAD-210	450	pCi/L	396±526	Jv	364	136±137	Jv	225	176±161	UJv	253	—	114±145	UJv	225	274±603	UJv	517
LEAD-212	10	pCi/L	2.72±4.12	UJv	4.69	0±2.51	4.46	0±4.17	4.52	—	—	2.64±2.34	UJv	4.1	0±9.76	UJv	8.7	
LEAD-214	10	pCi/L	5.47±5.53	Jv	4.37	1.33±4.96	UJv	5.42	4.74±2.94	UJv	5.37	—	0.545±4.86	UJv	4.85	2.33±7.5		10.1
PLUTONIUM-241	10	pCi/L	—			—		—			—	—	—		-0.254±0.499		0.85	
POTASSIUM-40	100	pCi/L	0±15.8		32.5	7.16±26.3	UJv	20.5	32.5±15.8	UJv	32.6	—	26.9±15.7	UJv	31.7	7.61±41.5	UJv	48.7
RADIUM-226	1	pCi/L	2.44±0.846		0.675	1.89±0.7	0.183	1.85±0.702	0.506	—	—	1.62±0.723	0.688	—	1.9±0.721		0.52	
SODIUM-22	10	pCi/L	0.961±1.26		2.39	-0.00269±1.11	2.08	0.165±1.11	2.03	—	—	-0.62±1.26	2.15	—	-0.889±2.72		4.79	
STRONTIUM-90	1	pCi/L	-0.112±0.191		0.419	-0.0326±0.252	0.566	-0.06±0.195	0.42	—	—	-0.309±0.378	0.83	—	0.181±0.248		0.521	
THALLIUM-208	5	pCi/L	0.128±2.66	UJv	2.72	0.962±1.44	2.66	1.44±1.51	UJv	2.72	—	1.85±1.37	UJv	2.59	4.11±2.87	UJv	5.43	
THORIUM-234	200	pCi/L	52±140	UJv	143	18.4±91.7	UJv	84.8	6.79±122	UJv	115	—	45±105	UJv	105	57.2±182	UJv	159
TRITIUM	300	pCi/L	62.6±162		280	17000±606	281	15700±577	275	—	—	0±158	280	—	-79.6±136		249	
URANIUM-235	25	pCi/L	1.57±9.65		15.4	-0.48±8.59	14.7	7.61±11.2	UJv	17	—	5.18±8.41	14.8	—	4.37±15.7		27.4	
URANIUM-238	500	pCi/L	52±140	UJv	125	18.4±91.7	UJv	84.8	6.79±122	UJv	115	—	45±105	UJv	94.9	57.2±182	UJv	159

QA =Samples taken as part of the quality assurance program.

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APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-023 GWGW0711 08/24/98	UCD1-025 GWGW0709 08/27/98	UCD1-028 GWGW0712 09/01/98	UCD1-034 GWGW0716 08/31/98	UCD2-007 GWGW0704 08/26/98	UCD2-014 GWGW0696 08/26/98
Analyte	CRDL	Units	MDA	MDA	MDA	MDA	MDA	MDA
ACTINIUM-228	20	pCi/L	8.76±11.3 UJv 12.1	--	2.38±10.2 13	--	4.98±5.11 UJv 9.85	4.61±13.7 UJv 11.7
AMERICIUM-241	1	pCi/L	--	--	0.0306±0.0424 0.118	--	--	--
BISMUTH-212	70	pCi/L	3.92±13.8 24.5	--	12.1±14.1 27.4	--	14.5±10.9 UJv 20.7	1.37±11 19.4
BISMUTH-214	10	pCi/L	4±6.72 UJv 7.76	--	0±4.1 7.8	--	2.61±5.63 UJv 5.62	0±6.51 UJv 6.25
CARBON-14	20	pCi/L	39.6±7.98 11.6	-5.42±6.03 10.8	3.29±4.87 8.23	--	-2.58±8.07 14.1	646±24.9 18.9
CESIUM-137	10	pCi/L	0.159±1.86 3.25	--	-0.384±1.7 3.07	--	-0.00559±1.5 2.61	-0.393±1.44 2.45
COBALT-60	10	pCi/L	0.826±1.71 3.22	--	0.594±1.91 3.73	--	1.19±1.36 2.68	-0.221±1.57 2.39
GROSS ALPHA	2	pCi/L	1.64±0.818 Jv 1.15	--	0.842±0.692 UJv 1.19	--	0.885±0.76 UJv 1.36	1.99±0.893 Jv 1.15
GROSS BETA	3	pCi/L	0.75±0.596 UJv 1.21	--	0.562±0.585 1.22	--	0.954±0.681 UJv 1.37	1.39±0.656 Jv 1.24
LEAD-210	450	pCi/L	171±299 UJv 450	--	131±215 354	--	145±174 UJv 270	42.9±171 263
LEAD-212	10	pCi/L	3.39±2.9 UJv 5.11	--	0±2.78 5.19	--	1.1±4.56 UJv 3.92	2±4.3 UJv 4.76
LEAD-214	10	pCi/L	2.81±3.76 UJv 6.52	--	2.58±3.51 6.36	--	0.502±5.55 UJv 5.43	5.43±6.24 UJv 5.84
PLUTONIUM-241	10	pCi/L	--	--	-0.889±0.796 1.46	--	--	--
POTASSIUM-40	100	pCi/L	5.47±31.1 UJv 29.4	--	29.5±20.4 UJv 43.3	--	12.9±25.5 UJv 28.5	19.1±16.2 UJv 31.6
RADIUM-226	1	pCi/L	1.18±0.58 0.513	--	4.7±1.09 0.658	--	2.02±0.847 0.84	1.27±0.603 0.522
SODIUM-22	10	pCi/L	-1.15±1.68 2.76	--	-0.61±2 3.41	--	0.993±1.36 2.63	-0.00731±1.38 2.47
STRONTIUM-90	1	pCi/L	0.0694±0.235 0.513	--	-0.0213±0.245 0.519	--	-0.258±0.28 0.629	-0.111±0.24 0.555
THALLIUM-208	5	pCi/L	3.06±1.97 UJv 3.7	--	2.03±2.12 UJv 3.85	--	2.74±1.65 UJv 3.1	1.63±1.52 UJv 2.81
THORIUM-234	200	pCi/L	90.3±148 UJv 139	--	0±197 UJv 134	--	121±75.6 UJv 124	55.5±72.5 UJv 120
TRITIUM	300	pCi/L	-51±132 239	60±156 269	-172±148 279	-172±149 280	0±149 263	4010±330 288
URANIUM-235	25	pCi/L	-2.92±11 18.8	--	-2.66±10.3 16.6	--	0±16.2 UJv 16	14.3±15.3 UJv 16.7
URANIUM-238	500	pCi/L	90.3±148 UJv 139	--	0±197 UJv 118	--	121±75.6 UJv 124	55.5±72.5 UJv 120

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**APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD2-016 GWGW0688 08/24/98	UCD2-017 GWGW0692 08/24/98	UCD2-026 GWGW0710 08/27/98	UCD2-029 GWGW0713 09/01/98	UCD2-030 GWGW0714 09/01/98	UCD2-031 GWGW0715 09/01/98
Analyte	CRDL	Units	MDA	MDA	MDA	MDA	MDA	MDA
ACTINIUM-228	20	pCi/L	8.71±14.1 UJv 14.7	--	--	1.5±8.81 UJv 8.63	7.98±4.92 UJv 9.87	6.22±5.08 UJv 9.67
AMERICIUM-241	1	pCi/L	--	--	--	-0.0249±0.162 UJv 0.125	0.053±0.0479 J v 0.0429	-0.00636±0.0323 0.142
BISMUTH-212	70	pCi/L	4.39±16.2 28.5	--	--	3.14±8.81 15.9	1.7±10.8 19.1	3.52±10.8 19.4
BISMUTH-214	10	pCi/L	5.32±9.25 UJv 7.89	--	--	1.54±5.83 UJv 5.08	3.79±6.4 UJv 5.91	1.47±4.81 UJv 5.89
CARBON-14	20	pCi/L	-3.24±6.61 11.6	-4.75±5.54 9.88	-4.06±7.41 13.1	15±4.58 J 7.16	14.7±4.51 J 7.07	5.45±5.58 UJv 9.33
CESIUM-137	10	pCi/L	0.284±2.01 3.53	--	--	1.38±1.25 UJv 2.32	2.28±2.34 UJv 2.58	-1.37±1.26 1.99
COBALT-60	10	pCi/L	-0.813±2.21 3.23	--	--	-0.348±1.06 1.86	-0.455±1.44 2.49	0.541±1.24 2.39
GROSS ALPHA	2	pCi/L	1.07±0.552 J v 0.729	--	--	0.825±0.634 UJv 1.02	1.3±0.744 J v 1.02	0.98±0.604 J v 0.956
GROSS BETA	3	pCi/L	0.693±0.527 UJv 1.03	--	--	0.84±0.609 UJv 1.22	0.924±0.594 UJv 1.17	0.469±0.497 1.01
LEAD-210	450	pCi/L	240±209 UJv 323	--	--	192±284 UJv 433	99.8±270 UJv 267	53.4±221 UJv 194
LEAD-212	10	pCi/L	1.9±7.89 UJv 7.32	--	--	3.6±2.21 UJv 3.88	1.75±4.4 UJv 4.45	3.79±2.49 UJv 4.41
LEAD-214	10	pCi/L	1.9±7.65 UJv 7.14	--	--	0.126±5.17 UJv 4.63	4.61±5.56 UJv 5.71	2.87±5.63 UJv 5.7
PLUTONIUM-241	10	pCi/L	--	--	--	-0.19±1.08 1.82	-0.338±0.764 1.3	-0.543±0.626 1.07
POTASSIUM-40	100	pCi/L	24.8±21.2 UJv 41.8	--	--	3.45±23.4 UJv 20.3	12.8±16.3 30.8	13.7±33.7 UJv 23.2
RADIUM-226	1	pCi/L	0.195±0.234 UJv 0.36	--	--	3.7±0.951 0.556	4.75±1.1 0.582	3.44±0.922 0.629
SODIUM-22	10	pCi/L	0.938±1.85 3.53	--	--	0.981±0.926 2.02	-0.358±1.25 2.19	0.26±1.29 2.41
STRONTIUM-90	1	pCi/L	0.0252±0.239 0.531	--	--	0.178±0.2 0.398	-0.038±0.194 0.417	0.161±0.204 0.408
THALLIUM-208	5	pCi/L	3.72±2.26 UJv 4.21	--	--	0±1.35 2.52	0.677±2.68 UJv 3.18	3.49±2.88 J v 2.38
THORIUM-234	200	pCi/L	0±101 162	--	--	75±156 UJv 135	79.7±118 UJv 111	3.48±88.6 104
TRITIUM	300	pCi/L	-31±155 277	-80.7±138 252	62.7±163 281	-84.5±151 275	28.7±161 280	-196±143 273
URANIUM-235	25	pCi/L	20.5±20.9 UJv 23.5	--	--	6.53±8.13 UJv 14.3	2.77±9.13 16	8.29±9.63 UJv 16.9
URANIUM-238	500	pCi/L	0±101 162	--	--	75±156 UJv 122	79.7±118 UJv 111	3.48±88.6 UJv 89.8

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APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD2-032 GWGW0698 08/25/98			UCD2-035 GWGW0706 09/02/98			UCD2-036 GWGW0718 09/02/98			UCD2-037 GWGW0719 09/01/98			UCD2-038 GWGW0720 09/02/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	7.26±10.1	UJv	9.57	0.792±8.47		9.36	9.22±5.09	UJv	10.1	3.5±7.82		13.9	2.44±14.5	UJv	13.4
AMERICIUM-241	1	pCi/L	—			0.0043±0.00862		0.0684	0.00289±0.0057		0.0642	0.0306±0.0424		0.118	0.0272±0.0387		0.0685
BISMUTH-212	70	pCi/L	14.4±12.7	UJv	15.7	9.9±10.8	UJv	20.4	2.98±10.3		18.7	20.4±16.6	UJv	30.7	20.4±20.9	UJv	25
BISMUTH-214	10	pCi/L	2.22±6.63	UJv	4.38	4.61±4.85	UJv	5.78	0±3.25		6.08	2.52±8.57	UJv	8.19	6.84±4.47	UJv	7.81
CARBON-14	20	pCi/L	-1.06±5.75		10	3.78±4.24	UJv	7.11	3.76±6.62		11.2	3.29±4.18	UJv	7.03	5.88±4.4	UJv	7.28
CESIUM-137	10	pCi/L	-0.194±1.3		2.29	1.11±1.41		2.63	-0.671±1.35		2.28	0.0939±1.96		3.43	0.978±2		3.49
COBALT-60	10	pCi/L	0.0577±1.28		2.39	1.68±1.49	UJv	2.67	-0.254±1.44		2.59	2.59±1.91	UJv	3.9	0.489±1.75		3.15
GROSS ALPHA	2	pCi/L	1.94±0.814		0.914	1.38±0.738	JJv	1.02	1±0.672	UJv	1.02	0.853±0.733	UJv	1.31	1.39±0.769	JJv	1.12
GROSS BETA	3	pCi/L	0.802±0.57	UJv	1.13	0.904±0.547	UJv	1.07	0.721±0.578	UJv	1.17	1.02±0.679	UJv	1.36	1.03±0.609	UJv	1.19
LEAD-210	450	pCi/L	231±278	JJv	200	39.5±328	UJv	284	117±234	UJv	202	0±223		330	179±527	UJv	344
LEAD-212	10	pCi/L	0±2.69		4.75	0±2.38		4.35	2.21±5.53	UJv	4.84	3.29±7.42	UJv	7.01	4.18±5.7	UJv	4.7
LEAD-214	10	pCi/L	4.64±7.06	UJv	5.94	0.128±6.13	UJv	5.42	0±3.09		5.56	2.42±6.89	UJv	7.43	1.38±7.82	UJv	7.02
PLUTONIUM-241	10	pCi/L	—			-0.92±0.683		1.26	-1.04±0.771		1.42	-0.832±0.986		1.68	-0.605±0.611		1.12
POTASSIUM-40	100	pCi/L	25.3±27.6	JJv	21.3	20.7±23.1	UJv	22.2	32.4±17.9	UJv	36.3	41.3±24	UJv	47.9	39.1±45.4	JJv	31.6
RADIUM-226	1	pCi/L	0.64±0.551	UJv	0.77	1.04±0.59		0.235	1.89±0.859		0.799	5.15±1.14		0.475	1.53±0.846	Jv	0.97
SODIUM-22	10	pCi/L	-0.925±1.23		2.08	1.03±1.31	UJv	2.13	-1.05±1.37		2.31	0.00334±2.12		3.8	-1.24±1.98		3.28
STRONTIUM-90	1	pCi/L	0.0361±0.271		0.601	-0.304±0.584		1.27	-0.237±0.44		0.965	0.0854±0.178		0.365	0.0135±0.517		1.19
THALLIUM-208	5	pCi/L	1.71±2.44	UJv	2.97	1.26±2.23	UJv	2.2	1.62±1.56	UJv	2.91	1.83±4.3	UJv	4.55	2.68±4.6	UJv	3.12
THORIUM-234	200	pCi/L	35±89.4	UJv	103	38.9±103	UJv	111	21.5±101	UJv	95	0±104		158	61.9±171	UJv	142
TRITIUM	300	pCi/L	-80.5±137		251	-131±162		283	-67.7±183		317	-167±145		273	-138±162		283
URANIUM-235	25	pCi/L	-7.23±10.6		15.5	5.88±13.8	UJv	14.5	-2.51±8.98		15.2	13.1±15.4	UJv	23.4	9.33±18.4	UJv	18.5
URANIUM-238	500	pCi/L	35±89.4	UJv	94	38.9±103	UJv	111	21.5±101	UJv	95	0±104		158	61.9±171	UJv	128

QA =Samples taken as part of the quality assurance program.
 — =Not Analyzed.
 < =Below detection limit.

**APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD2-039 GWGW0705 09/02/98		UCD2-039 GWGW0717 09/02/98 DUPLICATE		UCD2-040 GWGW0707 09/01/98		UCD4-041 GWGW0708 08/27/98		UCD4-042 GWGW0699 08/25/98		UCD4-043 GWGW0700 08/25/98	
Analyte	CRDL	Units	MDA		MDA		MDA		MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	1.58±7.66	10.6	8.44±4.85	UJv 9.47	0±3.99	7.62	8.38±5.12	UJv 9.97	1.02±6.77	9.52	8.09±9.5	17.9
AMERICIUM-241	1	pCi/L	-0.0144±0.127	UJv 0.102	0.0277±0.0393	0.0692	0.0175±0.0308	0.121	0.0326±0.0452	0.123	0.0396±0.0399	UJv 0.0436	0.00418±0.0104	0.123
BISMUTH-212	70	pCi/L	16.3±21.6	UJv 20.9	6.92±9.8	18.3	-3.18±7.84	13.5	9.23±10.1	UJv 19	9.2±9.95	UJv 19	0±50.9	UJv 31.9
BISMUTH-214	10	pCi/L	0±5.56	6.45	3.75±5.3	UJv 4.54	2.18±5.06	UJv 3.58	5.2±3.01	UJv 5.67	4.91±7.65	UJv 6.49	9.79±5.7	UJv 10.5
CARBON-14	20	pCi/L	32.5±8.22	12.6	22.3±5.56	8.51	5.24±8.78	14.9	-3.07±5.27	9.31	-5.45±5.58	10	2.76±5.63	9.58
CESIUM-137	10	pCi/L	0.649±1.52	2.73	0.609±3.27	UJv 2.25	1.83±2.72	UJv 1.91	0.518±1.35	2.46	-0.266±1.4	2.45	-0.998±2.62	4.32
COBALT-60	10	pCi/L	0.217±1.39	2.54	-0.722±1.3	2.26	1.15±1.04	UJv 2.03	0.503±1.3	2.47	-0.473±1.31	2.33	-1.04±3.29	4.75
GROSS ALPHA	2	pCi/L	0.566±0.627	1.21	1.36±0.719	J Jv 0.906	0.608±0.553	UJv 0.883	1.3±0.718	J Jv 0.975	1.91±1.05	Jv 1.8	1.68±0.829	Jv 1.15
GROSS BETA	3	pCi/L	0.595±0.484	UJv 0.975	0.583±0.502	UJv 1.02	1.04±0.605	UJv 1.18	0.0908±0.541	1.2	1.69±0.696	J Jv 1.3	1.76±0.731	J Jv 1.38
LEAD-210	450	pCi/L	214±177	UJv 273	336±266	UJv 430	340±383	J Jv 288	64.3±236	UJv 184	190±163	UJv 297	86.2±610	UJv 581
LEAD-212	10	pCi/L	1.98±3.98	UJv 4.58	1.12±4.46	UJv 4.62	3.04±2.07	UJv 3.63	3.1±2.56	UJv 4.49	0.762±4.06	UJv 3.94	0±4.64	8.54
LEAD-214	10	pCi/L	1.54±4.99	UJv 5.61	1.72±4.74	UJv 5.66	0.669±4.21	UJv 4.52	4.9±5.05	UJv 5.67	0.268±5.81	UJv 5.55	3.47±5.22	9.32
PLUTONIUM-241	10	pCi/L	-0.987±0.652	1.2	-0.748±0.593	1.09	0.487±0.767	1.29	-0.0287±0.65	1.1	-0.389±0.627	1.07	-0.222±0.344	0.587
POTASSIUM-40	100	pCi/L	16.9±14.7	UJv 29.2	27.3±15.1	UJv 30.8	2.15±26.2	UJv 16.7	0.94±28	UJv 21.6	0±17.6	34.6	0±33.2	70
RADIUM-226	1	pCi/L	0.821±0.593	J Jv 0.673	0.881±0.598	J Jv 0.649	3.13±0.867	0.443	0.828±0.416	J 0.359	0.967±0.489	J 0.175	1.69±0.735	0.689
SODIUM-22	10	pCi/L	-0.00548±1.36	2.44	0.548±1.17	2.18	0.428±0.984	1.77	1.86±1.32	UJv 2.73	-0.714±1.12	1.94	0.331±2.54	4.6
STRONTIUM-90	1	pCi/L	0.135±0.324	0.668	-0.159±0.288	0.633	-0.0752±0.215	0.463	0.164±0.253	0.513	0.135±0.331	0.716	0.419±0.409	0.845
THALLIUM-208	5	pCi/L	0.903±2.54	UJv 3.2	0.264±3.15	UJv 2.85	0.998±2.47	UJv 2.36	2.83±1.52	UJv 2.92	1.74±1.47	UJv 2.79	2.64±5.14	UJv 5.54
THORIUM-234	200	pCi/L	0±117	UJv 107	136±86.8	UJv 144	68±66.7	UJv 111	67.5±60.1	UJv 108	41.3±83.8	UJv 95.4	13.4±181	UJv 167
TRITIUM	300	pCi/L	212±253	UJv 349	-47.7±170	293	-81.2±145	265	0±157	279	-27.4±144	257	-54.3±141	254
URANIUM-235	25	pCi/L	7.48±9.12	UJv 16.1	4.04±9.72	17.2	-3.1±7.49	12.9	4.09±13.8	UJv 16.4	12.1±9.85	UJv 15.8	19.5±19	UJv 29.1
URANIUM-238	500	pCi/L	0±117	UJv 107	136±86.8	UJv 144	68±66.7	UJv 111	67.5±60.1	UJv 108	41.3±83.8	UJv 95.4	13.4±181	UJv 167

QA =Samples taken as part of the quality assurance program.

- =Not Analyzed.

< =Below detection limit.

**APPENDIX B
RADIONUCLIDES
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			UCD1-004 GWGW0750 11/05/98			UCD1-012 GWGW0757 11/09/98			UCD1-013 GWGW0751 11/05/98			UCD1-018 GWGW0758 11/09/98			UCD1-025 GWGW0745 11/04/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	5.29±4.16	U UJv	7.75	4.7±4.02	U UJv	7.53	7.04±4.37	U UJv	8.14	--			--		
AMERICIUM-241	1	pCi/L	--			--			--			--			--		
BISMUTH-212	70	pCi/L	7.12±8.47	U	15.6	3.89±8.79	U	15.8	-4.26±8.91	U	15.1	--			--		
BISMUTH-214	10	pCi/L	0±6.95	U	7.79	0±5.27	U	5.82	101±13.6		3.97	--			--		
CARBON-14	20	pCi/L	--			238±12.1		10.9	1340±27.5		12	3.14±5.31	U	9.01	2.18±7.13	U	12.2
CESIUM-137	10	pCi/L	-0.42±1.17	U	2.01	0.215±1.16	U	2.05	0±1.69	U	3.12	--			--		
COBALT-60	10	pCi/L	0.257±1.11	U	2.04	1.12±1.01	U UJv	2.04	-0.17±1.2	U	2.13	--			--		
GROSS ALPHA	2	pCi/L	2.62±1.28	J v	1.76	5.71±2.09		2.56	8.81±1.63		1.66	--			--		
GROSS BETA	3	pCi/L	1.38±1.03	U UJv	2.03	3.25±1.66	J v	3.01	2.09±1.47	U UJv	2.32	--			--		
LEAD-210	450	pCi/L	236±187	U UJv	276	83.4±135	U UJv	204	0±28.6	U	42.6	--			--		
LEAD-212	10	pCi/L	0.226±3.1	U	3.52	1.14±3.08	U UJv	3.14	0.0507±2.97	U	3.25	--			--		
LEAD-214	10	pCi/L	27±6.74		3.7	7.28±5.04	J v	3.8	107±13.7		3.84	--			--		
PLUTONIUM-241	10	pCi/L	--			--			--			--			--		
POTASSIUM-40	100	pCi/L	5.31±19.4	U UJv	21.2	6.32±25.7	U UJv	17.1	7.75±23.5	U UJv	20.5	--			--		
RADIUM-226	1	pCi/L	0.824±0.646	U UJv	0.888	1.19±0.548		0.56	2±0.943		0.98	--			--		
SODIUM-22	10	pCi/L	0.589±0.796	U	1.88	0.404±1.06	U	2	0.231±1.16	U	2.12	--			--		
STRONTIUM-90	1	pCi/L	-0.0284±0.278	U UJl	0.479	0.31±0.336	U	0.705	-0.0272±0.215	U UJl	0.372	--			--		
THALLIUM-208	5	pCi/L	1.89±2.06	U UJv	2.43	0.19±2.4	U UJv	2.28	0.726±2.49	U UJv	2.35	--			--		
THORIUM-234	200	pCi/L	37.5±92	U UJv	89.3	0±53.8	U	92.7	0±28.2	U	42	--			--		
TRITIUM	300	pCi/L	-199±159	U	307	-295±157	U	308	16200±394		300	--			-173±168	U	293
URANIUM-235	25	pCi/L	4.31±7.04	U	12.3	-0.592±7.4	U	12.6	5.74±7.6	U UJv	13.3	--			--		
URANIUM-238	500	pCi/L	37.5±92	U UJv	89.3	0±53.8	U	92.7	0±28.2	U	42	--			--		

-- = Not analyzed.

APPENDIX B
RADIONUCLIDES
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD1-028 GWGW0734 11/02/98		UCD1-028 GWGW0735 11/02/98		UCD2-007 GWGW0752 11/05/98		UCD2-007 GWGW0753 11/05/98		UCD2-014 GWGW0754 11/05/98	
Analyte	CRDL	Units	MDA		MDA		MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	8.03±5.72	U UJv 8.34	0.631±6.08	U 7.44	--	--	--	--	2.88±4.39	U 7.82
AMERICIUM-241	1	pCi/L	-0.0651±0.238	U 0.559	-0.0511±0.0732	U 0.422	--	--	--	--	--	--
BISMUTH-212	70	pCi/L	11.3±9.28	U UJv 17.0	-2.51±7.76	U 13.1	--	--	--	--	0±16.7	U UJv 14.9
BISMUTH-214	10	pCi/L	43.6±9.65	4.09	39.7±7.92	3.56	--	--	--	--	55.6±9.4	4.1
CARBON-14	20	pCi/L	2.49±5.28	U 9.0	4.1±5.5	U UJv 9.27	1.9±5.98	U 10.2	1.53±5.85	U 10	189±11	10.6
CESIUM-137	10	pCi/L	-0.902±1.29	U 2.14	-0.154±1.11	U 1.9	--	--	--	--	-0.33±1.41	U 2.08
COBALT-60	10	pCi/L	0.281±1.11	U 2.04	-0.559±0.996	U 1.68	--	--	--	--	1.04±1.31	U 2.49
GROSS ALPHA	2	pCi/L	7.07±2.82	3.65	3.86±1.21	1.46	--	--	--	--	3.71±1.66	1.8
GROSS BETA	3	pCi/L	4.35±2.22	Jv 4.22	2.95±1.29	Jv 1.98	--	--	--	--	0.489±1.02	U 2.22
LEAD-210	450	pCi/L	68.4±443	U UJv 444	12.6±131	U 196	--	--	--	--	0±31.3	U 37.8
LEAD-212	10	pCi/L	2.27±2.92	U UJv 3.38	0±2.01	U 3.51	--	--	--	--	1.38±4.59	U UJv 3.81
LEAD-214	10	pCi/L	45.5±8.48	3.97	37.4±7.81	3.76	--	--	--	--	58.1±11.8	4.54
PLUTONIUM-241	10	pCi/L	2.32±4.42	U 7.48	-0.073±3.37	U 5.76	--	--	--	--	--	--
POTASSIUM-40	100	pCi/L	41.3±29	J Jv 18.5	1.15±23.8	U UJv 18.3	--	--	--	--	26.7±16	U UJv 30.8
RADIUM-226	1	pCi/L	2.17±0.663	0.143	1.17±0.625	0.412	--	--	--	--	0.672±0.616	U UJv 0.906
SODIUM-22	10	pCi/L	-0.228±1	U 1.78	0.472±1.12	U 2.05	--	--	--	--	0.061±1.37	U 2.15
STRONTIUM-90	1	pCi/L	-0.425±0.469	U UJI 0.833	-0.00395±0.173	U UJI 0.298	--	--	--	--	0.0489±0.372	U UJI 0.879
THALLIUM-208	5	pCi/L	0.472±2.55	U UJv 2.44	1.74±1.26	U UJv 2.3	--	--	--	--	0.227±1.88	U 2.32
THORIUM-234	200	pCi/L	88.8±140	U UJv 126	79.4±58.1	U UJv 93.6	--	--	--	--	0±34.5	U 43.8
TRITIUM	300	pCi/L	-234±147	U 288	-262±153	U 300	-320±153	U 303	-289±145	U 257	480±172	301
URANIUM-235	25	pCi/L	8.54±14.2	U UJv 15.5	9.05±7.89	U UJv 13.6	--	--	--	--	-2.68±9.45	U 15.7
URANIUM-238	500	pCi/L	88.8±140	U UJv 126	79.4±58.1	U UJv 93.6	--	--	--	--	0±34.5	U 43.8

-- = Not analyzed.

APPENDIX B
RADIONUCLIDES
FALL QUARTER 1998 GROUNDWATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			UCD2-015 GWGW0755 11/05/98	UCD2-016 GWGW0747 11/04/98	UCD2-017 GWGW0748 11/04/98	UCD2-026 GWGW0746 11/04/98	UCD2-029 GWGW0736 11/02/98
Analyte	CRDL	Units	MDA	MDA	MDA	MDA	MDA
ACTINIUM-228	20	pCi/L	1.72±7.08 U UJv 8.22	--	--	--	2.79±7.16 U UJv 8.15
AMERICIUM-241	1	pCi/L	--	--	--	--	0.0607±0.122 U 0.237
BISMUTH-212	70	pCi/L	19.3±15.1 J Jv 14.4	--	--	--	0.783±9.97 U 17.1
BISMUTH-214	10	pCi/L	49.9±9.89 9.84	--	--	--	31.6±7.91 4.03
CARBON-14	20	pCi/L	5.08±6.32 U UJv 10.6	0.572±5.9 U 10.2	-2.53±5.24 U 9.24	2.84±5.38 U 9.15	4.29±5.36 U UJv 9.02
CESIUM-137	10	pCi/L	0±2.58 U 3.83	--	--	--	-0.603±1.27 U 2.12
COBALT-60	10	pCi/L	1.08±1.07 U UJv 1.97	--	--	--	-1.12±1.29 U 2.08
GROSS ALPHA	2	pCi/L	3±1.29 1.61	--	--	--	1.59±1.02 J v 1.56
GROSS BETA	3	pCi/L	0.672±1.04 U 2.17	--	--	--	1.96±1.03 J Jv 1.94
LEAD-210	450	pCi/L	165±384 U UJv 348	--	--	--	180±153 U UJv 230
LEAD-212	10	pCi/L	0.135±3.53 U UJv 3.38	--	--	--	1.13±3.6 U UJv 3.29
LEAD-214	10	pCi/L	52.2±8.39 4.15	--	--	--	31.1±7.68 3.88
PLUTONIUM-241	10	pCi/L	--	--	--	--	-1.87±3.06 U 5.28
POTASSIUM-40	100	pCi/L	24±13.7 U UJv 26.5	--	--	--	24.9±15 U UJv 28.5
RADIUM-226	1	pCi/L	0.796±0.671 U UJv 0.954	--	--	--	1.42±0.536 0.143
SODIUM-22	10	pCi/L	0.57±1.67 U UJv 1.85	--	--	--	0.12±1.14 U 2.03
STRONTIUM-90	1	pCi/L	-0.198±0.592 U UJv 1.03	--	--	--	0.578±0.549 U UJv 0.912
THALLIUM-208	5	pCi/L	0±1.41 U 2.59	--	--	--	-0.546±1.69 U 2.49
THORIUM-234	200	pCi/L	67.3±96.3 U UJv 110	--	--	--	0±64 U 101
TRITIUM	300	pCi/L	-341±153 U 304	-205±161 U 282	-171±155 U 271	-139±155 U 270	-183±139 U 269
URANIUM-235	25	pCi/L	2.99±13.4 U UJv 14.8	--	--	--	3.85±7.76 U 13.5
URANIUM-238	500	pCi/L	67.3±96.3 U UJv 110	--	--	--	0±64 U 101

-- = Not analyzed.

APPENDIX B
RADIONUCLIDES
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Location Sample ID Date QA			UCD2-030 GWGW0737 11/02/98			UCD2-031 GWGW0738 11/02/98			UCD2-032 GWGW0740 11/03/98			UCD2-035 GWGW0741 11/03/98			UCD2-036 GWGW0742 11/03/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	7.56±11.2	U UJv	12.4	3.18±4.21	U	7.56	5.4±3.98	U UJv	7.43	—	—	—	5.13±6.54	U UJv	7.76
AMERICIUM-241	1	pCi/L	-0.0185±0.00515	U	0.295	0.0592±0.161	U	0.539	—	—	—	—	—	—	0.144±0.133	U	0.285
BISMUTH-212	70	pCi/L	9.99±13.3	U	23.6	0.537±8.76	U	15.3	-3.82±8.11	U	13.7	—	—	—	3.58±8.49	U	15.4
BISMUTH-214	10	pCi/L	28.6±9.48		5.53	35.8±7.66		3.83	36±7.18		3.19	—	—	—	34.3±8.43		3.69
CARBON-14	20	pCi/L	9.24±5.64	J Jv	9.21	4.17±5.11	U UJv	8.59	2.27±5.25	U	8.95	1.13±5.36	U	9.21	2.53±5.62	U	9.57
CESIUM-137	10	pCi/L	0.735±1.76	U	3.09	0.0867±1.27	U	2.21	0±1.69	U	3.13	—	—	—	-0.915±1.22	U	1.93
COBALT-60	10	pCi/L	1.49±1.63	U UJv	3.1	0±1.7	U	2.38	0.186±1.08	U	1.98	—	—	—	-0.615±1.37	U	1.93
GROSS ALPHA	2	pCi/L	2.87±1.13		1	2.16±1.12	J v	1.58	6.31±1.71		1.96	—	—	—	2.3±1.14	J v	1.73
GROSS BETA	3	pCi/L	1.52±0.947	U UJv	1.82	1.24±1.03	U UJv	2.06	2.54±1.26	J v	2.43	—	—	—	2.04±1.03	J v	1.93
LEAD-210	450	pCi/L	172±181	U UJv	277	0±31.9	U	36.8	3.61±34.2	U UJv	27.7	—	—	—	136±129	U UJv	219
LEAD-212	10	pCi/L	2.52±5.81	U UJv	4.56	1.02±3.79	U UJv	3.59	0±1.89	U	3.35	—	—	—	0±2.45	U	3.94
LEAD-214	10	pCi/L	28.2±8.36		5.66	33.2±8.39		4.33	36.7±6.92		3.43	—	—	—	34±6.93		3.82
PLUTONIUM-241	10	pCi/L	1.94±3.3	U	5.57	0.261±4.02	U	6.85	—	—	—	—	—	—	1.69±4.75	U	7.23
POTASSIUM-40	100	pCi/L	41±33.6	J Jv	27.7	18.1±27.8	U UJv	21.4	7.56±28.9	U UJv	18.2	—	—	—	24.2±13.3	U UJv	26
RADIUM-226	1	pCi/L	0.575±0.422	J Jv	0.564	1.03±0.452		0.14	0.422±0.497	U UJv	0.786	—	—	—	1.41±0.809	J v	0.948
SODIUM-22	10	pCi/L	0.412±1.76	U	2.77	1.05±1.16	U	2.24	0.141±1.13	U	2.06	—	—	—	0.455±1.27	U	1.99
STRONTIUM-90	1	pCi/L	0.206±0.2	U UJv	0.331	-0.090±0.532	U UJv	0.919	0.0942±0.527	U UJv	1.03	—	—	—	0.178±0.256	U UJv	0.486
THALLIUM-208	5	pCi/L	3.16±1.93	U UJv	3.48	0.0057±2.2	U UJv	1.98	0.251±2.07	U UJv	2.04	—	—	—	1.74±2.38	U UJv	2.49
THORIUM-234	200	pCi/L	10.9±130	U UJv	115	0±35.3	U	41.7	0±25.8	U	37.5	—	—	—	0±69.5	U	110
TRITIUM	300	pCi/L	-107±157	U	299	-124±147	U	281	-185±160	U	308	1350±187	279	—	-340±146	U	290
URANIUM-235	25	pCi/L	0±13.1	U	19.6	5.94±10.3	U UJv	15.3	5.78±6.39	U UJv	11.2	—	—	—	5.96±8.76	U UJv	14.6
URANIUM-238	500	pCi/L	10.9±130	U UJv	115	0±35.3	U	41.7	0±25.8	U	37.5	—	—	—	0±69.5	U	110

— = Not analyzed.

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Location Sample ID Date QA			UCD2-037 GWGW0749 11/04/98			UCD2-038 GWGW0743 11/03/98			UCD2-039 GWGW0744 11/03/98			UCD2-040 GWGW0739 11/02/98			UCD4-041 GWGW0759 11/09/98		
Analyte	CRDL	Units	MDA			MDA			MDA			MDA			MDA		
ACTINIUM-228	20	pCi/L	0±6.75	U	8.77	5.46±6.34	U	12.2	2.41±6.55	U UJv	7.85	1.22±7.48	U UJv	8.07	0±6.73	U	7.98
AMERICIUM-241	1	pCi/L	0.000637±0.00618	U	0.227	0.0993±0.134	U	0.273	-0.00520±0.204	U	0.26	0.172±0.221	U UJv	0.364	0.0691±0.104	U	0.221
BISMUTH-212	70	pCi/L	8.2±11.6	U UJv	16.4	2.01±13.8	U	25.2	7.38±11.9	U UJv	14	10.4±12.1	U UJv	14.1	4.74±8.67	U	15.8
BISMUTH-214	10	pCi/L	53.2±11.5		4.2	36.1±9.21		6.14	39.8±8.23		3.86	24.6±7.5		3.8	25.8±7.11		4.04
CARBON-14	20	pCi/L	-3.19±6.08	U	10.7	9.47±5.35	J Jv	8.7	11.8±5.95	J Jv	9.59	9.54±5.77	J Jv	9.42	7.11±8.67	U UJv	14.6
CESIUM-137	10	pCi/L	-0.0176±1.23	U	2.14	0.755±1.76	U	3.3	-0.0675±1.19	U	2.05	0±2.54	U	3.77	-1.17±1.23	U	1.92
COBALT-60	10	pCi/L	0.51±1.11	U	2.07	-1.11±1.86	U	3.24	0.101±1.1	U	1.98	0.158±1.1	U	1.78	0.249±1.08	U	1.92
GROSS ALPHA	2	pCi/L	1.83±1.12	J v	1.56	3.21±1.38		1.62	3.89±1.55		1.89	1.78±0.896	J v	1.34	2.06±0.96	J v	1.32
GROSS BETA	3	pCi/L	1.83±1.18	U UJv	2.32	1.46±1.11	U UJv	2.22	1.99±1.28	U UJv	2.54	1.99±0.712	J	366	1.23±1.3	U UJv	2.17
LEAD-210	450	pCi/L	161±299	U UJv	452	137±230	U	374	46.7±220	U UJv	166	0±261	U	3.24	136±126	U UJv	213
LEAD-212	10	pCi/L	2.49±3.8	U UJv	3.34	4.76±2.78	U UJv	5.1	0.144±3.07	U	3.44	0±5.54	U UJv	4.03	2.76±3.53	U UJv	3.24
LEAD-214	10	pCi/L	53.7±8.96		4.3	28.5±7.54		5.57	41.9±7.58		4.18	28.6±6.26		1.09	25.4±6.44		4.04
PLUTONIUM-241	10	pCi/L	3.98±3.68	U UJv	6.14	2.71±3.55	U UJv	5.98	3.31±3.4	U UJv	5.69	1.44±3.19	U	5.40	1.87±3.9	U	6.62
POTASSIUM-40	100	pCi/L	21.7±26.9	J Jv	19.6	7.34±30.7	U UJv	28.5	9.63±25.5	U UJv	25.5	8.25±21.8	U UJv	17	2.83±27.8	U UJv	17.3
RADIUM-226	1	pCi/L	3.02±1.04		0.654	1.44±0.759	J v	0.786	1.53±0.781	J v	0.79	1.36±0.562		0.487	2.53±0.746		0.405
SODIUM-22	10	pCi/L	0.307±1.13	U	2.08	0.182±1.82	U	3.28	0.0192±1.06	U	1.91	0.0063±1.05	U	1.81	-0.562±1.1	U	1.83
STRONTIUM-90	1	pCi/L	-0.211±0.148	U UJl	0.266	0.168±0.209	U UJl	0.394	0.0935±0.226	U UJl	0.435	0.239±0.731	U UJl	1.24	0.0546±0.336	U	0.766
THALLIUM-208	5	pCi/L	1.16±2.93	U UJv	2.58	1.79±2.99	U UJv	3.69	0.726±2.13	U UJv	2.41	2.2±1.27	U UJv	2.35	0.695±2.19	U UJv	2.2
THORIUM-234	200	pCi/L	12.1±124	U	138	38.5±82.1	U	132	77±127	U UJv	85.4	0±73	U	119	0±143	U UJv	90.1
TRITIUM	300	pCi/L	-263±175	U	309	29.3±153	U	261	-193±146	U	283	-405±190	U	341	-245±138	U	271
URANIUM-235	25	pCi/L	6±8.68	U	15.1	4.24±17.4	U UJv	17.4	9.69±13.7	U UJv	14.2	4.31±11.9	U UJv	14.1	5.38±15.9	U UJv	14.9
URANIUM-238	500	pCi/L	12.1±124	U UJv	130	38.5±82.1	U	132	77±127	U UJv	85.4	0±73	U	119	0±143	U UJv	90.1

- = Not analyzed

APPENDIX B
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Location Sample ID Date QA			UCD4-042 GWGW0760 11/10/98		UCD4-043 GWGW0761 11/10/98	
Analyte	CRDL	Units	MDA		MDA	
ACTINIUM-228	20	pCi/L	0.944±8.55	U 8.73	8.31±6.66	U UJv 12
AMERICIUM-241	1	pCi/L	-0.0074±0.00131	U 0.0415	0.00425±0.0136	U 0.0903
BISMUTH-212	70	pCi/L	-1±9.24	U 16	9.4±13.6	U 24.1
BISMUTH-214	10	pCi/L	40±9.17	4.2	53.3±12	5.54
CARBON-14	20	pCi/L	-3.54±4.98	U 8.85	4.08±5.84	U UJv 9.87
CESIUM-137	10	pCi/L	-1.1±1.25	U 2.05	-0.627±1.83	U 3.08
COBALT-60	10	pCi/L	-1.02±1.38	U 1.94	2.77±2.92	U UJv 3.07
GROSS ALPHA	2	pCi/L	2.02±0.915	Jv 1.24	2.23±1.02	Jv 1.47
GROSS BETA	3	pCi/L	-0.597±1.35	U 2.36	1.82±1.23	U UJv 2.03
LEAD-210	450	pCi/L	140±306	U 464	168±189	U UJv 289
LEAD-212	10	pCi/L	2.27±4.17	U UJv 3.38	0.516±5.09	U UJv 4.55
LEAD-214	10	pCi/L	45.4±7.97	4.4	45.1±9.82	5.94
PLUTONIUM-241	10	pCi/L	2.86±3.55	U UJv 5.98	0.451±3.41	U 5.84
POTASSIUM-40	100	pCi/L	22.7±15.4	U UJv 26.8	36.9±19.2	U UJv 37.6
RADIUM-226	1	pCi/L	0.31±0.32	U UJv 0.48	0.461±0.389	U UJv 0.553
SODIUM-22	10	pCi/L	0.891±1.14	U 2.17	0.465±1.6	U 2.91
STRONTIUM-90	1	pCi/L	0.251±0.33	U 0.705	-0.0715±0.455	U 0.68
THALLIUM-208	5	pCi/L	2.13±1.29	U UJv 2.38	0±2	U 3.63
THORIUM-234	200	pCi/L	124±90.8	U UJv 147	0±102	U 145
TRITIUM	300	pCi/L	-208±108	U 191	-165±109	U 191
URANIUM-235	25	pCi/L	-0.144±8.49	U 14.7	9.99±18.9	U UJv 20.7
URANIUM-238	500	pCi/L	124±90.8	U UJv 147	0±102	U 145

- = Not analyzed.

**APPENDIX B
FIELD PARAMETERS
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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		EH-F mvolts	pH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE deg C	TURBIDITY-F ntu
Location	Date					
PCD	02/26/98	125	7.80	232	11.3	23.7
PCU	02/26/98	108	7.85	237	12.0	20.5
STPO	02/26/98	108	6.76	984	20.4	4.30

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SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Analyte Units		EH-F mvolts	pH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE degree C	TURBIDITY-F ntu
Location	Date					
PCD	05/28/98	1	8.16	514	17.1	28.2
PCU	05/28/98	68	7.56	814	16.7	26.7
STPO	05/28/98	147	7.05	875	22.1	4.5

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FIELD PARAMETERS
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Location	Date	EC-F	EH-F	pH-F	TEMPERATURE
		umhos/cm	mvolts		°C
PCU	08/31/98	437	-47	8.09	22.3
PCD	08/31/98	457	-43	8.11	22.7
STPO	08/31/98	972	-19	7.02	26.4

APPENDIX B
METALS
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Analyte	Location		PCD		PCD		PCU		STPO	
	Sample ID		SWSW0216		SWSW0217		SWSW0218		SWSW0219	
	Date		02/26/98		02/26/98		02/26/98		02/26/98	
	CRDL	Units	QA		DUPLICATE					
ANTIMONY	5	ug/L	<1.9		<1.9		<2	B Up	<1.9	
ARSENIC	3	ug/L	<3.1		<3.1		<3.1		3.6	B
BARIUM	20	ug/L	48.6	E Jk	48.7	E Jk	49.6	E Jk	37.4	E Jk
BERYLLIUM	1	ug/L	<0.07		<0.07		<0.07		<0.07	
CADMIUM	1	ug/L	<0.3		<0.3		<0.3		<0.3	
CALCIUM	2000	ug/L	18500		18500		18700		20000	
CHROMIUM	10	ug/L	<0.58	B Uo	<0.50		<0.65	B Uo	<2.6	B Uo
CHROMIUM, HEXAVALENT	10	ug/L	<4		<4		<4		<4	
COBALT	10	ug/L	<0.50		<0.50		<0.50		<0.92	B Uo
COPPER	10	ug/L	1.6	B	1.2	B	<1.2		10	
IRON	100	ug/L	<9.1	B Up	<9.5	B Up	<15.7	B Up	<108	Uo
LEAD	3	ug/L	<1		<1		<1		<1	
MAGNESIUM	2000	ug/L	24200	E Jk	24200	E Jk	24300	E Jk	19900	E Jk
MANGANESE	10	ug/L	14.1		5.7		6.9		6.6	
MERCURY	0.2	ug/L	<0.10		<0.10		<0.10		<0.10	
MOLYBDENUM	10	ug/L	<0.9		<0.9		<0.9		<5.7	B Uo
NICKEL	20	ug/L	2.2	B	2.7	B	5.7	B	2	B
POTASSIUM	2000	ug/L	1390	B	1400	B	1380	B	13500	
SELENIUM	3	ug/L	<2.6		<2.6		<2.6		7.8	
SILVER	10	ug/L	<0.9		<0.9		<0.9		1.2	B
SODIUM	2000	ug/L	10700	E Jk	10700	E Jk	10500	E Jk	149000	E Jk
THALLIUM	10	ug/L	<3.2		<3.2		<3.2		<3.2	
VANADIUM	10	ug/L	2.5	B	2.5	B	2.4	B	13.1	
ZINC	20	ug/L	<0.3		<0.3		<0.36	B Up	36.3	

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
METALS
SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Analyte	Location		PCD	PCU	STPO	STPO
	Sample ID	Date	SWSW0221	SWSW0220	SWSW0222	SWSW0223
	CRDL	QA	05/28/98	05/28/98	05/28/98	05/28/98
	Units					DUPLICATE
ANTIMONY	5	ug/L	<2.5	<2.5	<2.5	<2.5
ARSENIC	3	ug/L	3.3	4.9	6.7	6.1
BARIUM	20	ug/L	105	103	55.5	56.1
BERYLLIUM	1	ug/L	<0.2	<0.2	<0.2	<0.2
CADMIUM	1	ug/L	<1.2	<1.2	<1.2	<1.2
CALCIUM	2000	ug/L	32800	32600	23400	23600
CHROMIUM	10	ug/L	5.7 B	6.4 B	4.9 B	4.8 B
CHROMIUM, HEXAVALENT	10	ug/L	<8 J Up	<7 J Up	<5 J Up	<4
COBALT	10	ug/L	<0.9	<0.9	<0.9	<0.9
COPPER	10	ug/L	<0.8	<0.8	11	11.5
IRON	100	ug/L	<27.4 B Up	<25.1 B Up	70.3 B	71.6 B
LEAD	3	ug/L	<2	<2	<2	<2
MAGNESIUM	2000	ug/L	41500	39100	28300	28500
MANGANESE	10	ug/L	9.5 B	9.7 B	5.8 B	5.7 B
MERCURY	0.2	ug/L	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM	10	ug/L	2.5 B	2.1 B	7.4 B	7.3 B
NICKEL	20	ug/L	1.1 B	1.5 B	<1.1	<1.1
POTASSIUM	2000	ug/L	2230	1860 B	13200	13300
SELENIUM	3	ug/L	<2.5	<2.5	<2.5	<4.8 Uo
SILVER	10	ug/L	<4 B Uo	<5.1 B Uo	<4.9 B Uo	<4.9 B Uo
SODIUM	2000	ug/L	37100	31200	149000	148000
THALLIUM	10	ug/L	<4	<4	<4	<4
VANADIUM	10	ug/L	6.4 B	6.8 B	12.9	13
ZINC	20	ug/L	<3.5 B Up	<5.5 B Up	64.9	64.9

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

**APPENDIX B
METALS
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Analyte	Location		PCD		PCU		PCU		STPO	
	Sample ID	Date	SWSW0226	08/31/98	SWSW0224	08/31/98	SWSW0225	08/31/98	SWSW0227	08/31/98
	CRDL	Units					DUPLICATE			
ANTIMONY	5	ug/L	<0.18	B Uop	<0.18	B Uop	<0.19	B Uop	<0.22	B Uop
ARSENIC	3	ug/L	<1.8		<1.8		<1.8		4.9	
BARIUM	20	ug/L	94.9		97.3		96.7		53.8	
BERYLLIUM	1	ug/L	<0.02		0.04	B	0.03	B	<0.02	
CADMIUM	1	ug/L	<0.060		0.08	B	<0.060		<0.060	
CALCIUM	2000	ug/L	31700		32700		29600		27100	
CHROMIUM	10	ug/L	3.9	B	4.1	B	4.1	B	3.9	B
CHROMIUM, HEXAVALENT	10	ug/L	<6.0		<6.0		<6.0		<6.0	
COBALT	10	ug/L	0.22	B	0.26	B	0.27	B	0.37	B
COPPER	10	ug/L	1.8	B	1.4	B	1.3	B	8.9	B
IRON	100	ug/L	242		240		238		211	
LEAD	3	ug/L	<0.2		<0.2		<0.2		<0.2	
MAGNESIUM	2000	ug/L	39500		40700		36800		33100	
MANGANESE	10	ug/L	2.6	B	3.8	B	3.4	B	4.5	B
MERCURY	0.2	ug/L	<0.10		<0.10		<0.10		<0.10	
MOLYBDENUM	10	ug/L	1.4	B	0.62	B	0.58	B	20.1	
NICKEL	20	ug/L	2.0	B	1.8	B	1.8	B	1.4	B
POTASSIUM	2000	ug/L	1530		1320		1200		7700	
SELENIUM	3	ug/L	<2.3		<2.3		<2.3		2.4	B
SILVER	10	ug/L	<0.50		<0.50		<0.50		<0.50	
SODIUM	2000	ug/L	25700		21900		19900		148000	
THALLIUM	10	ug/L	<0.05		0.07	B	<0.05		<0.05	
VANADIUM	10	ug/L	4.6	B	3.7	B	3.8	B	16.8	
ZINC	20	ug/L	6.0	B	4.8	B	3.8	B	28.3	

QA = Samples taken as part of the quality assurance program.

- = Not Analyzed.

< = Below detection limit.

APPENDIX B
GENERAL CHEMICALS
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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DAVIS, CALIFORNIA

			Location	PCD	PCD	PCU	STPO
			Sample ID	SWSW0216	SWSW0217	SWSW0218	SWSW0219
			Date	02/26/98	02/26/98	02/26/98	02/26/98
			QA		DUPLICATE		
Analyte	CRDL	Units					
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		141	133	133	205
CHLORIDES	1	mg/L		5.34	5.28	4.96	161
HARDNESS AS CaCO ₃	2	mg/L		126	127	126	111
NITROGEN, NITRATE	0.1	mg/L		0.122 Jh	0.119 Jh	0.092 Jh	8.68 Jh
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L		<0.05	<0.05	<0.05	5.46
SULFATE AS SO ₄	1	mg/L		23.8	23.6	23.7	63
ACUTE AQUATIC TOXICITY	--	%		100	100	100	--
TOTAL DISSOLVED SOLIDS	20	mg/L		187	195	184	617
TOTAL ORGANIC CARBON	1	mg/L		3.66	3.33	<0.5 Up	4

QA = Samples taken as part of the quality assurance program.
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APPENDIX B
GENERAL CHEMICALS
SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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			Location Sample ID Date QA	PCD SWSW0221 05/28/98	PCU SWSW0220 05/28/98	STPO SWSW0222 05/28/98	STPO SWSW0223 05/28/98 DUPLICATE
Analyte	CRDL	Units					
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		238	221	217	219
CHLORIDE	1	mg/L		23.4	23.9	117	112
HARDNESS AS CaCO ₃	2	mg/L		223	213	145	150
NITROGEN, NITRATE	0.1	mg/L		3.07	3.14	8.18 Jh	8.64 Jh
PHOSPHOROUS, AS PO ₄	1	mg/L		0.07 Jl	<0.05 UJl	3.51 Jl	4.11 Jl
SULFATE AS SO ₄	1	mg/L		32.4	33	68.4	66.4
TOTAL DISSOLVED SOLIDS	20	mg/L		358 Jc	332 Jc	600 Jc	609 Jc
TOTAL ORGANIC CARBON	1	mg/L		5.28	4.53	10.5	10.2
ACUTE AQUATIC TOXICITY	--	%		78	92	--	--

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.

APPENDIX B
GENERAL CHEMICALS
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

			Location Sample ID Date QA	PCD SWSW0226 08/31/98	PCU SWSW0224 08/31/98	PCU SWSW0225 08/31/98 DUPLICATE	STPO SWSW0227 08/31/98
Analyte	CRDL	Units					
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L		193	199	199	215
CHLORIDE	1	mg/L		21	17.5	17.1	101
HARDNESS	2	mg/L		211	213	209	167
NITROGEN, NITRATE	0.1	mg/L		2.52	2.37	2.25	9.29
PHOSPHORUS, DISSOLVED	1	mg/L		0.08 B	<0.05 UJf	0.23 B Jf	2.27
SULFATE AS SO ₄	1	mg/L		28.3	26.2	26	89.4
TOTAL DISSOLVED SOLIDS	20	mg/L		287	279	272	611
TOTAL ORGANIC CARBON	1	mg/L		6.6	2.58	3.92	8.32
ACUTE AQUATIC TOXICITY	--	%		100	97.5	--	--

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
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Analyte	Location		PCD		PCD		PCU		STPO	
	Sample ID		SWSW0216		SWSW0217		SWSW0218		SWSW0219	
	Date		02/26/98		02/26/98		02/26/98		02/26/98	
	CRDL	Units	QA		DUPLICATE					
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,1,1,2-TETRACHLOROETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5		<0.5		<0.5		<0.5	
1,1-DICHLOROETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,1-DICHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,2-DIBROMOETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,2-DICHLOROETHANE	1.0	ug/L	<0.5		<0.5		<0.5		<0.5	
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,3-DICHLOROBENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
2-BUTANONE	1.0	ug/L	<1	Rc	<1	Rc	<1	Rc	<1	Rc
2-HEXANONE	1.0	ug/L	<1		<1		<1		<1	
4-METHYL-2-PENTANONE	1.0	ug/L	<1	UJI	<1	UJI	<1	UJI	<1	UJI
ACETONE	5.0	ug/L	<1	JB UJzl	<1	JB UJzl	<1	JB UJzl	<1	B UJzl
BENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
BROMOCHLOROMETHANE	1.0	ug/L	<1		<1		<1		<1	
BROMODICHLOROMETHANE	0.50	ug/L	<0.5		<0.5		<0.5		1.4	
BROMOFORM	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
BROMOMETHANE	1.0	ug/L	<1		<1		<1		<1	
CARBON DISULFIDE	1.0	ug/L	<1		<1		<1		<1	
CARBON TETRACHLORIDE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
CHLOROBENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
CHLOROETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
CHLOROFORM	0.50	ug/L	<0.5		<0.5		<0.5		4.3	
CHLOROMETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
ETHYLBENZENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
METHYLENE CHLORIDE	1.0	ug/L	<1	JB Uz	<1	JB Uz	<1	JB Uz	<1	B UJcz
STYRENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
TETRACHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
TOLUENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
TRICHLOROETHENE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
VINYL CHLORIDE	0.50	ug/L	<0.5		<0.5		<0.5		<0.5	
XYLENES (TOTAL)	1.0	ug/L	<1		<1		<1		<1	

QA = Samples taken as part of the quality assurance program.

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APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location Sample ID Date QA	PCD SWSW0221 05/28/98	PCU SWSW0220 05/28/98	STPO SWSW0222 05/28/98	STPO SWSW0223 05/28/98 DUPLICATE
Analyte	CRDL	Units				
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L	<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
2-HEXANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L	<1.2 J UJcy	<1.5 J UJcy	<1.2 J UJcy	<1.4 J UJcy
BENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L	<0.50	<0.50	3.8	3.8
BROMOFORM	0.50	ug/L	<0.50	<0.50	0.27 J	0.28 J
BROMOMETHANE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L	<0.16 J UJlz	<0.50	5.1 J	5.2 J
CHLOROMETHANE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.50	<0.50	1.6	1.6
ETHYLBENZENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L	<0.96 JB UJcz	<0.75 JB UJcz	<1.4 JB UJcz	<1.5 JB UJcz
STYRENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L	0.16 J	0.12 J	0.44 J	0.44 J
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L	<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L	<1.0	<1.0	<1.0	<1.0

QA = Samples taken as part of the quality assurance program.
D = Duplicate sample.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	CRDL	Units	Location	PCD	PCU	PCU	STPO
			Sample ID Date QA	SWSW0226 08/31/98	SWSW0224 08/31/98	SWSW0225 08/31/98 DUPLICATE	SWSW0227 08/31/98
1,1,1-TRICHLOROETHANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,1,2-TRICHLOROETHANE	1.0	ug/L		<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,1-DICHLOROETHENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,2-DIBROMOETHANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROETHANE	1.0	ug/L		<0.50	<0.50	<0.50	<0.50
1,2-DICHLOROPROPANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
2-BUTANONE	1.0	ug/L		<1.0	Rc	<1.0	Rc
2-HEXANONE	1.0	ug/L		<1.0	Rc	<1.0	<1.0
4-METHYL-2-PENTANONE	1.0	ug/L		<1.0	<1.0	<1.0	<1.0
ACETONE	5.0	ug/L		<1.0	<1.0	<1.0	<1.0
BENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
BROMOCHLOROMETHANE	1.0	ug/L		<1.0	<1.0	<1.0	<1.0
BROMODICHLOROMETHANE	0.50	ug/L		0.44	J	<0.50	18.3
BROMOFORM	0.50	ug/L		<0.50	<0.50	<0.50	0.72
BROMOMETHANE	1.0	ug/L		<1.0	<1.0	<1.0	<1.0
CARBON DISULFIDE	1.0	ug/L		<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
CHLOROBENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
CHLOROETHANE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
CHLOROFORM	0.50	ug/L		0.79	<0.50	<0.50	21.4
CHLOROMETHANE	0.50	ug/L		<0.50	UJ	<0.50	UJ
CIS-1,2-DICHLOROETHENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
CIS-1,3-DICHLOROPROPENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
DIBROMOCHLOROMETHANE	0.50	ug/L		<0.50	<0.50	<0.50	9.9
ETHYLBENZENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	0.50	ug/L		<1.5	B UJcz	<1.8	B UJcz
STYRENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
TETRACHLOROETHENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
TOLUENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
TRANS-1,2-DICHLOROETHENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
TRICHLOROETHENE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
VINYL CHLORIDE	0.50	ug/L		<0.50	<0.50	<0.50	<0.50
XYLENES (TOTAL)	1.0	ug/L		<1.0	<1.0	<1.0	<1.0

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APPENDIX B
PESTICIDES
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		PCD	PCD	PCU	STPO
	Sample ID		SWSW0216	SWSW0217	SWSW0218	SWSW0219
	Date QA		02/26/98	02/26/98 DUPLICATE	02/26/98	02/26/98
CRDL	Units					
4,4'-DDD	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
4,4'-DDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
4,4'-DDT	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ALDRIN	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
ALPHA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
ALPHA-CHLORDANE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
AROCLOR-1016	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
AROCLOR-1221	0.4	ug/L	<2.0	<2.0	<2.0	<2.0
AROCLOR-1232	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
AROCLOR-1242	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
AROCLOR-1248	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
AROCLOR-1254	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
AROCLOR-1260	0.2	ug/L	<1.0	<1.0	<1.0	<1.0
BETA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
DELTA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
DIELDRIN	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ENDOSULFAN I	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
ENDOSULFAN II	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ENDRIN	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
ENDRIN KETONE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10
GAMMA-BHC	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
GAMMA-CHLORDANE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
HEPTACHLOR	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.050	<0.050	<0.050	<0.050
METHOXYCHLOR	0.1	ug/L	<0.50	<0.50	<0.50	<0.50
TOXAPHENE	1.0	ug/L	<10.0	<10.1	<10.1	<10.0

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-- = Not Analyzed.

APPENDIX B
PESTICIDES
SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location Sample ID Date QA			PCD SWSW0221 05/28/98	PCU SWSW0220 05/28/98	STPO SWSW0222 05/28/98	STPO SWSW0223 05/28/98 DUPLICATE
Analyte	CRDL	Units				
4,4'-DDD	0.02	ug/L	<0.10	<0.0027 JP UJu	<0.025	<0.025
4,4'-DDE	0.02	ug/L	<0.10	<0.025	<0.0015 JP Ru	<0.0013 JP Ru
4,4'-DDT	0.02	ug/L	<0.10	<0.0023 JP Ru	<0.025	<0.025
ALDRIN	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
ALPHA-BHC	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
ALPHA-CHLORDANE	0.01	ug/L	<0.050	<0.012	<0.012	<0.0022 JP Ru
AROCLOR-1016	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
AROCLOR-1221	0.4	ug/L	<2.0	<0.50	<0.50	<0.50
AROCLOR-1232	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
AROCLOR-1242	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
AROCLOR-1248	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
AROCLOR-1254	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
AROCLOR-1260	0.2	ug/L	<1.0	<0.25	<0.25	<0.25
BETA-BHC	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
DELTA-BHC	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
DIELDRIN	0.02	ug/L	<0.10	<0.025	<0.0076 JP Ru	<0.007 JP Ru
ENDOSULFAN I	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
ENDOSULFAN II	0.02	ug/L	<0.10	<0.025	<0.025	<0.025
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.025	<0.025	<0.025
ENDRIN	0.02	ug/L	<0.10	<0.025	<0.025	<0.025
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.025	<0.0044 JP UJu	0.0056 J
ENDRIN KETONE	0.02	ug/L	<0.10	<0.025	<0.025	<0.025
GAMMA-BHC	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
GAMMA-CHLORDANE	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
HEPTACHLOR	0.01	ug/L	<0.050	<0.012	<0.0072 JP Ru	<0.0073 JP Ru
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.050	<0.012	<0.012	<0.012
METHOXYCHLOR	0.1	ug/L	<0.50	<0.12	<0.0089 JP Ru	<0.12
TOXAPHENE	1.0	ug/L	<5.0	<1.2	<1.2	<1.2

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APPENDIX B
PESTICIDES
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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DAVIS, CALIFORNIA

Location			PCD	PCU	PCU	STPO
Sample ID			SWSW0226	SWSW0224	SWSW0225	SWSW0227
Date			08/31/98	08/31/98	08/31/98	08/31/98
QA					DUPLICATE	
Analyte	CRDL	Units				
4,4'-DDD	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
4,4'-DDE	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
4,4'-DDT	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ALDRIN	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
ALPHA-BHC	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
ALPHA-CHLORDANE	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
AROCLOR-1016	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1221	0.4	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1232	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1242	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1248	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1254	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
AROCLOR-1260	0.2	ug/L	<0.061	<0.31	<0.31	<0.062
BETA-BHC	0.01	ug/L	<0.0098	<0.050	<0.050	0.024 P Ju
DELTA-BHC	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
DIELDRIN	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ENDOSULFAN I	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
ENDOSULFAN II	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ENDOSULFAN SULFATE	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ENDRIN	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ENDRIN ALDEHYDE	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
ENDRIN KETONE	0.02	ug/L	<0.02	<0.10	<0.10	<0.020
GAMMA-BHC	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
GAMMA-CHLORDANE	0.01	ug/L	<0.0098	<0.050	<0.050	<0.010
HEPTACHLOR	0.01	ug/L	<0.0098	<0.050	<0.050	0.020 P
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.0098	<0.050	<0.050	<0.0089 JP Ru
METHOXYCHLOR	0.1	ug/L	<0.098	<0.50	<0.50	<0.20
TOXAPHENE	1.0	ug/L	<0.49 UJc	<2.5 UJc	<2.5 UJc	<1.0 UJc

QA = Samples taken as part of the quality assurance program.

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**APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location Sample ID Date QA			PCD SWSW0216 02/26/98		PCD SWSW0217 02/26/98 DUPLICATE		PCU SWSW0218 02/26/98		STPO SWSW0219 02/26/98	
Analyte	CRDL	Units	MDA		MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	1.11±7.33	13.5	4.58±9.56	14.9	--		--	
BISMUTH-212	70	pCi/L	-9.34±15.4	26	6.8±14.8	27.8	--		--	
BISMUTH-214	10	pCi/L	8.59±6.9 J Jv	6.7	8.58±7.69 UJv	8.86	--		--	
CARBON-14	20	pCi/L	-3.61±5.11	9.08	-1.49±5.3	9.27	--		--	
CESIUM-137	10	pCi/L	1.74±2.04 UJf	4.02	8.84±3.84 Jf	3.4	--		--	
COBALT-60	10	pCi/L	0.78±1.61	3.43	-0.0435±1.92	3.58	--		--	
GROSS ALPHA	2	pCi/L	0.19±0.605	1.4	0.17±0.373	0.795	--		--	
GROSS BETA	3	pCi/L	0.968±0.809 UJv	1.69	2±0.559 J	0.927	--		--	
LEAD-210	450	pCi/L	110±238	372	139±327 UJv	307	--		--	
LEAD-212	10	pCi/L	0.361±5.74	6.62	5.37±3.67 UJv	6.66	--		--	
LEAD-214	10	pCi/L	5.75±4.36 UJv	8.1	4.16±4.9 UJv	8.55	--		--	
POTASSIUM-40	100	pCi/L	40.8±25.8 UJv	55.4	20.1±23.2	47	--		--	
RADIUM-226	1	pCi/L	0.412±0.269 J	0.124	0.456±0.282 J	0.124	--		--	
SODIUM-22	10	pCi/L	0.153±1.91	3.72	0.227±1.89	3.6	--		--	
STRONTIUM-90	1	pCi/L	0.099±0.705	1.41	0.836±0.712 UJv	1.33	--		--	
THALLIUM-208	5	pCi/L	1.96±2.12	4.13	3.22±2.29 UJv	4.48	--		--	
THORIUM-234	200	pCi/L	7.99±107	160	0±198 UJv	166	--		--	
TRITIUM	300	pCi/L	0±105	183	32.1±110	189	-62.2±103	183	-60.5±100	179
URANIUM-235	25	pCi/L	5.76±11.8	21.3	10.9±13.9 UJv	24.7	--		--	
URANIUM-238	500	pCi/L	7.99±107	160	0±198 UJv	144	--		--	

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**APPENDIX B
RADIONUCLIDES
SPRING QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			PCD		PCU		STPO		STPO	
Sample ID			SWSW0221		SWSW0220		SWSW0222		SWSW0223	
Date			05/28/98		05/28/98		05/28/98		05/28/98	
QA									DUPLICATE	
Analyte	CRDL	Units	MDA		MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	6±6.47	UJv	7.67	--	--	--	--	--
BISMUTH-212	70	pCi/L	0.584±7.39		13	--	--	--	--	--
BISMUTH-214	10	pCi/L	0±4.67	UJd	4.95	--	--	--	--	--
CARBON-14	20	pCi/L	7.95±3.75	J Jv	6.09	--	--	--	--	--
CESIUM-137	10	pCi/L	0±1.67		3.08	--	--	--	--	--
COBALT-60	10	pCi/L	-0.0715±1.06		1.91	--	--	--	--	--
GROSS ALPHA	2	pCi/L	1.44±1.15	UJv	1.85	--	--	--	--	--
GROSS BETA	3	pCi/L	2.26±1.38	UJv	2.27	--	--	--	--	--
LEAD-210	700	pCi/L	20.2±30.9	UJv	26.2	--	--	--	--	--
LEAD-212	10	pCi/L	2.59±1.83	UJv	3.19	--	--	--	--	--
LEAD-214	10	pCi/L	6.51±4.12	J Jdv	3.61	--	--	--	--	--
POTASSIUM-40	100	pCi/L	6.99±20.4	UJv	18.2	--	--	--	--	--
RADIUM-226	1	pCi/L	0.27±0.324	UJv	0.498	--	--	--	--	--
SODIUM-22	10	pCi/L	-0.224±1.01		1.79	--	--	--	--	--
STRONTIUM-90	1	pCi/L	0.0672±0.396		0.829	--	--	--	--	--
THALLIUM-208	5	pCi/L	1.1±1.06	UJv	1.96	--	--	--	--	--
THORIUM-234	350	pCi/L	0±25		34.4	--	--	--	--	--
TRITIUM	300	pCi/L	-68.3±122		218	-34.8±126	223	0±116	201	-60.2±108
URANIUM-235	25	pCi/L	2.73±10.4	UJv	11.1	--	--	--	--	--
URANIUM-238	10	pCi/L	0±25		34.4	--	--	--	--	--

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**APPENDIX B
RADIONUCLIDES
SUMMER QUARTER 1998 SURFACE WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Location			PCD			PCU		PCU		STPO	
Sample ID			SWSW0226			SWSW0224		SWSW0225		SWSW0227	
Date			08/31/98			08/31/98		08/31/98		08/31/98	
QA								DUPLICATE			
Analyte	CRDL	Units	MDA			MDA		MDA		MDA	
ACTINIUM-228	20	pCi/L	2.44±13.6	UJv	14.1	--		--		--	
BISMUTH-212	70	pCi/L	7.53±15.2		27.4	--		--		--	
BISMUTH-214	10	pCi/L	5.04±4.2	UJv	7.67	--		--		--	
CARBON-14	20	pCi/L	-1.43±6.92		12.1	--		--		--	
CESIUM-137	10	pCi/L	2.75±2.77	UJv	3.31	--		--		--	
COBALT-60	10	pCi/L	0.21±1.95		3.57	--		--		--	
GROSS ALPHA	2	pCi/L	1.45±0.71	Jv	0.883	--		--		--	
GROSS BETA	3	pCi/L	1.97±0.727	Jv	1.34	--		--		--	
LEAD-210	700	pCi/L	145±208	UJv	323	--		--		--	
LEAD-212	10	pCi/L	2.89±6.03	UJv	6.85	--		--		--	
LEAD-214	10	pCi/L	5.13±4.42	UJv	7.2	--		--		--	
POTASSIUM-40	100	pCi/L	7.99±43.4	UJv	38.6	--		--		--	
RADIUM-226	1	pCi/L	0.818±0.445	Jv	0.17	--		--		--	
SODIUM-22	10	pCi/L	1.02±1.91		3.27	--		--		--	
STRONTIUM-90	1	pCi/L	-0.0802±0.309		0.667	--		--		--	
THALLIUM-208	5	pCi/L	1.65±3.61	UJv	3.3	--		--		--	
THORIUM-234	350	pCi/L	11.8±162	UJv	137	--		--		--	
TRITIUM	300	pCi/L	-142±149		278	-199±145	277	-111±148	272	-141±148	275
URANIUM-235	25	pCi/L	16.2±14.5	UJv	22.2	--		--		--	
URANIUM-238	10	pCi/L	11.8±162	UJv	137	--		--		--	

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< = Below detection limit.

APPENDIX B
FIELD PARAMETERS
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
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DAVIS, CALIFORNIA

		pH-F	SPECIFIC CONDUCTANCE (EC-F) umhos/cm	TEMPERATURE deg C	TURBIDITY-F ntu
Location	Date				
LF-01	02/19/98	6.78	82	10.61	>200
LF-03	02/19/98	7.75	83	9.61	>200
LS-01	02/19/98	6.73	--	11.90	--

-- = Not Analyzed.

APPENDIX B
METALS
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Location			LF-01	LF-01	LF-03	LS-01
Sample ID			STMW0106	STMW0107	STMW0108	RWSW0017
Date			02/19/98	02/19/98	02/19/98	02/19/98
QA			DUPLICATE			
Analyte	CRDL	Units				
ANTIMONY	5	ug/L	<1.9	<1.9	<1.9	13.6
ARSENIC	3	ug/L	<3.1	<3.1	<3.1	<3.1 U
BARIUM	20	ug/L	19.3 B	23.1	16.9 B	3.4
BERYLLIUM	1	ug/L	<0.07	<0.07	<0.07	<0.1 U
CADMIUM	1	ug/L	<0.3	<0.3	<0.3	<0.3 U
CALCIUM	2000	ug/L	6000	6560	5660	1290
CHROMIUM	10	ug/L	1.3 B	<0.5	2.2 B	<0.5 U
CHROMIUM, HEXAVALE	10	ug/L	<4	<4	<4	<4 U
COBALT	10	ug/L	3.8 B	0.77 B	5 B	<0.5 U
COPPER	10	ug/L	3.3 B	<3.2 B UJo	3.8 B	<1.2 U
IRON	100	ug/L	160 Jf	<43.3 B Uo	375	24.5 J
LEAD	3	ug/L	3.6	1.5 B	<1	<1 U
MAGNESIUM	2000	ug/L	3480	3640	4630	507
MANGANESE	10	ug/L	17.2 Jf	41.2 Jf	56.9	--
MERCURY	0.2	ug/L	<0.10 UJh	<0.10 UJh	<0.10 UJh	<0.10 U
MOLYBDENUM	10	ug/L	<0.9	<0.9	<0.9	<0.9 U
NICKEL	20	ug/L	<5.6 B Uo	<4.6 B Uo	14.2 B	1.7
POTASSIUM	2000	ug/L	8830	9160	13200	426
SELENIUM	3	ug/L	<2.6	<2.6	<2.6	<2.6 U
SILVER	10	ug/L	<0.9	<0.9	<0.9	<0.9 U
SODIUM	2000	ug/L	1550 B	1980 B	3900	1270
THALLIUM	10	ug/L	<3.2	<3.2	<3.2	--
VANADIUM	10	ug/L	1.8 B	2 B	6.2 B	<0.5 U
ZINC	20	ug/L	20.7	14.4 B	20	53

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-- = Not Analyzed.

**APPENDIX B
GENERAL CHEMICALS
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

Analyte	Location		LF-01	LF-01	LF-03	LS-01
	Sample ID		STMW0106	STMW0107	STMW0108	RWSW0017
	Date		02/19/98	02/19/98	02/19/98	02/19/98
	QA			DUPLICATE		
Analyte	CRDL	Units				
ALKALINITY, TOTAL AS CaCO ₃	10	mg/L	42.3	41.8	42.8	6.580
CHLORIDES	1	mg/L	2.73	3.23	6.8	0.502
HARDNESS AS CaCO ₃	2	mg/L	25.9	27.8	29.6	3.640
NITROGEN, NITRATE	0.1	mg/L	0.234	0.376	0.428	0.129
OIL & GREASE	2	mg/L	<2	2.19	3.79	13.900
PHOSPHORUS, TOTAL AS PO ₄	1	mg/L	1.7	1.53	1.98	0.080
SULFATE AS SO ₄	1	mg/L	1.49	2.18	2.82	<0.2 U
TOTAL DISSOLVED SOLIDS	20	mg/L	77	76	130	12.000
TOTAL ORGANIC CARBON	1	mg/L	10.1 Jf	17.5 Jf	12.3	3.990

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
VOLATILE ORGANIC COMPOUNDS
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

		Location Sample ID Date QA	LF-01 STMW0106 02/19/98	LF-01 STMW0107 02/19/98 DUPLICATE	LF-03 STMW0108 02/19/98	LS-01 RWSW0017 02/19/98
Analyte	CRDL	Units				
1,1,1-TRICHLOROETHANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,1,2,2-TETRACHLOROETHANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,1,2-TRICHLOROETHANE	1.0	ug/L	<0.5	<0.5	<0.5	--
1,1-DICHLOROETHANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,1-DICHLOROETHENE	0.50	ug/L	<0.5	0.34 J	<0.5	--
1,2-DIBROMO-3-CHLOROPROPANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,2-DIBROMOETHANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,2-DICHLOROBENZENE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,2-DICHLOROETHANE	1.0	ug/L	<0.5	<0.5	<0.5	--
1,2-DICHLOROPROPANE	0.50	ug/L	<0.5	<0.5	<0.5	--
1,3-DICHLOROBENZENE	0.50	ug/L	0.23 J	0.4 J	<0.5	--
1,4-DICHLOROBENZENE	0.50	ug/L	<0.5	0.37 J Jc	<0.5	--
2-BUTANONE	1.0	ug/L	1 Jc	<1 Jc	1.9 Jc	<1 U
2-HEXANONE	1.0	ug/L	<1 U J	<1 U J	<1 U J	<1 U
4-METHYL-2-PENTANONE	1.0	ug/L	<1 U J	<1 U J	<1 U J	<1 U
ACETONE	5.0	ug/L	<1 B UJcz	<1 B UJcz	<1 B UJcz	<5.9 U Jz
BENZENE	0.50	ug/L	<0.5	0.35 J	<0.5	<0.5 U
BROMOCHLOROMETHANE	1.0	ug/L	<1	<1	<1	<1 U
BROMODICHLOROMETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
BROMOFORM	1.0	ug/L	<0.5	<0.5	<0.5	<0.5 U
BROMOMETHANE	1.0	ug/L	<1	<1	<1	<1 U
CARBON DISULFIDE	0.50	ug/L	<1	<1	<1	<1 U
CARBON TETRACHLORIDE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
CHLOROBENZENE	0.50	ug/L	<0.5	1	<0.5	<0.5 U
CHLOROETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
CHLOROFORM	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
CHLOROMETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
CIS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.5	<0.5	--
CIS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
DIBROMOCHLOROMETHANE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
ETHYLBENZENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
METHYLENE CHLORIDE	1	ug/L	<1 B UJcz	<1 B UJcz	<1 B UJcz	<1.3 B UJz
STYRENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
TETRACHLOROETHENE	0.50	ug/L	0.59 J	<0.5	<0.5	<0.5 U
TOLUENE	0.50	ug/L	<0.5	0.7	<0.5	<0.5 U
TRANS-1,2-DICHLOROETHENE	0.50	ug/L	<0.5	<0.5	<0.5	--
TRANS-1,3-DICHLOROPROPENE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
TRICHLOROETHENE	0.50	ug/L	<0.5	0.7	<0.5	<0.5 U
VINYL CHLORIDE	0.50	ug/L	<0.5	<0.5	<0.5	<0.5 U
XYLENES (TOTAL)	1.0	ug/L	<1	<1	<1	<1 U

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX B
PESTICIDES
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Analyte	Location		LF-01	LF-01	LF-03	LS-01
	Sample ID		STMW0106	STMW0107	STMW0108	RWSW0017
	Date		02/19/98	02/19/98	02/19/98	02/19/98
	QA			DUPLICATE		
Analyte	CRDL	Units				
4,4'-DDD	0.02	ug/L	<0.1	<0.014 JP Ru	<0.0087 JP Ru	<0.10 U
4,4'-DDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
4,4'-DDT	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
ALDRIN	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
ALPHA-BHC	0.01	ug/L	<0.052	<0.053	<0.050	<0.050
ALPHA-CHLORDANE	0.01	ug/L	<0.052	<0.053	<0.050	<0.050
AROCLOR-1016	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
AROCLOR-1221	0.4	ug/L	<2.0	<2.0	<2.0	<2.0 U
AROCLOR-1232	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
AROCLOR-1242	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
AROCLOR-1248	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
AROCLOR-1254	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
AROCLOR-1260	0.2	ug/L	<1.0	<1.0	<1.0	<1.0 U
BETA-BHC	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
DELTA-BHC	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
DIELDRIN	0.02	ug/L	<0.016 JP Ru	<0.10	<0.016 JP Ru	<0.1 U
ENDOSULFAN I	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
ENDOSULFAN II	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
ENDOSULFAN SULFATE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
ENDRIN	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
ENDRIN ALDEHYDE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
ENDRIN KETONE	0.02	ug/L	<0.10	<0.10	<0.10	<0.10 U
GAMMA-BHC	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
GAMMA-CHLORDANE	0.01	ug/L	<0.052	<0.053	<0.050	0.014 JP J
HEPTACHLOR	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
HEPTACHLOR EPOXIDE	0.01	ug/L	<0.052	<0.053	<0.050	<0.050 U
METHOXYCHLOR	0.1	ug/L	<0.52	<0.53	<0.50	<0.50 U
TOXAPHENE	1.0	ug/L	<10.3	<10.5	<10.0	<10.0 U

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

**APPENDIX B
RADIONUCLIDES
WINTER QUARTER 1998 STORM WATER ANALYTICAL RESULTS
1998 ANNUAL WATER MONITORING REPORT
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA**

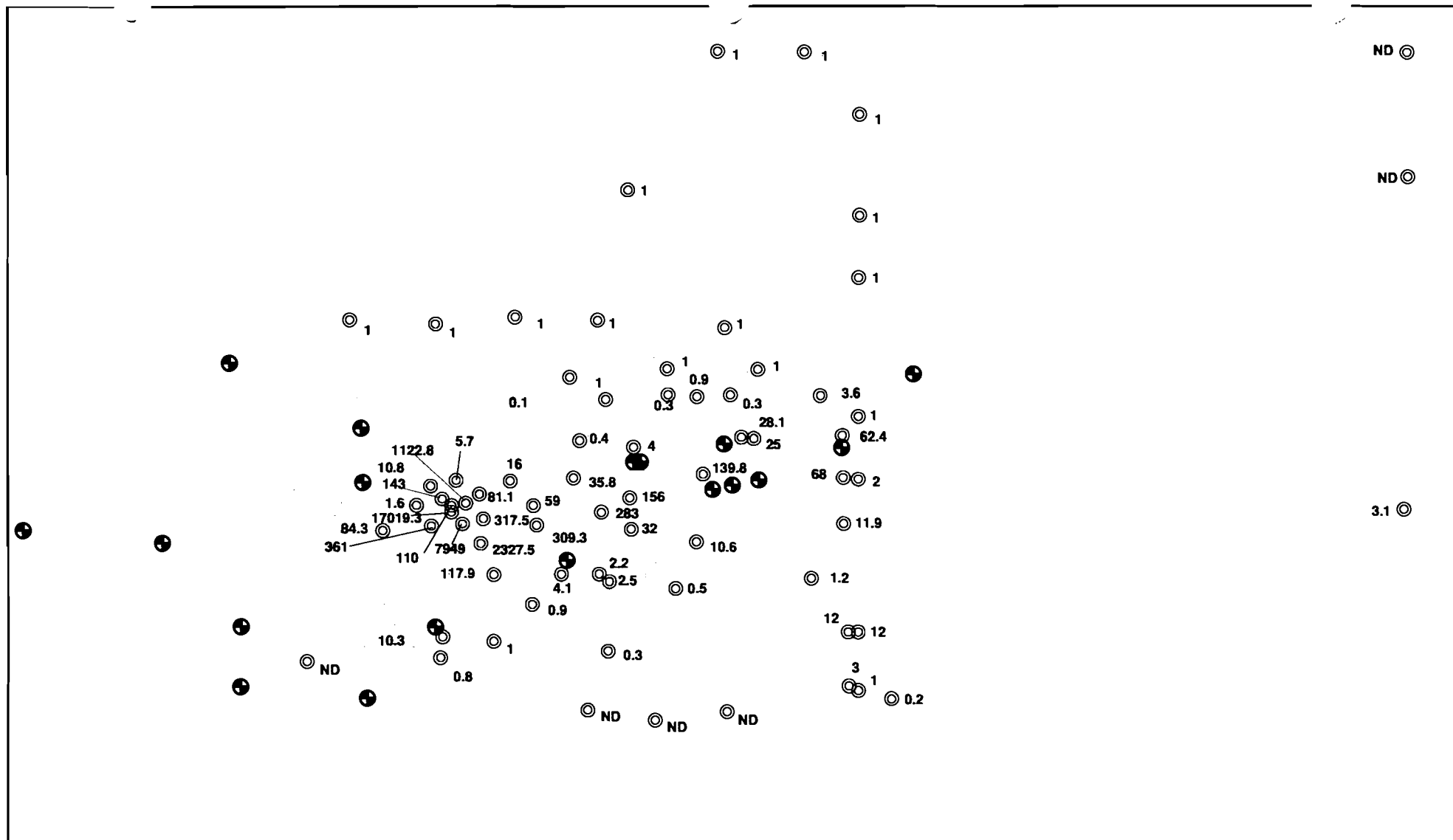
Analyte	CRDL	Location Sample ID Date QA		LF-01 STMW0106 02/19/98		LF-01 STMW0107 02/19/98 DUPLICATE		LF-03 STMW0108 02/19/98		LS-01 RWSW0017 02/19/98	
		Units	MDA	MDA	MDA	MDA	MDA	MDA	MDA	MDA	MDA
ACTINIUM-228	20	pCi/L	5.36±16.4	UJv 17.9	3.90±5.09	9.42	0.843±7.4	13.4	12.0±9.43	18.200	
BISMUTH-212	70	pCi/L	-6.84±18.7	31.7	14.0±14.1	20.7	1.6±14.7	26.9	1.95±23	36.100	
BISMUTH-214	10	pCi/L	6.01±6.11	UJv 8.78	1.96±4.84	UJv 5.56	3.58±6	UJv 7.69	2.06±10.6	9.940	
CARBON-14	20	pCi/L	-3.84±5.67	10	-7.14±5.28	9.55	-4.69±5.31	9.46	-0.429±5.5	9.550	
CESIUM-137	10	pCi/L	1.3±2.54	4.62	-0.786±1.35	2.26	1.04±3.66	UJv 3.39	-0.919±2.33	4.030	
COBALT-60	10	pCi/L	-0.155±2.42	4.42	-0.0716±1.24	2.28	2.77±3.07	UJv 4.12	-0.0848±2.5	4.800	
GROSS ALPHA	2	pCi/L	0.795±0.74	UJv 1.2	0.942±0.797	UJv 1.22	-0.0406±0.92	1.63	0.124±.219	0.418	
GROSS BETA	3	pCi/L	9.25±1.75	2.62	8.34±2.06	3.36	12.2±1.58	2.12	0.809±.487	0.938	
LEAD-210	450	pCi/L	99.5±189	293	148±218	UJv 202	0±36.2	61.1	190.0±642	569.000	
LEAD-212	10	pCi/L	3.96±7.86	UJv 6.13	3.95±2.65	UJv 4.65	0.746±4.24	UJv 4.74	10.0±4.53	8.080	
LEAD-214	10	pCi/L	7.01±7.87	UJv 8.04	3.55±5.22	UJv 5.44	1.36±8.47	UJv 7.42	5.69±5.62	9.870	
POTASSIUM-40	100	pCi/L	7.02±38.5	UJv 35.6	33.1±16.9	UJv 34.9	5.66±42.5	UJv 35.2	50.8±33.8	64.100	
RADIUM-226	1	pCi/L	0.136±0.235	0.421	0.235±0.461	0.845	0.184±0.18	UJv 0.125	0.146±.286	0.524	
SODIUM-22	10	pCi/L	-0.313±2.2	4.01	1.23±1.12	UJv 2.03	1.65±2.54	UJv 3.28	1.03±2.22	4.420	
STRONTIUM-90	1	pCi/L	-0.217±0.961	1.96	0.326±0.842	1.44	0.399±1	1.98	0.374±.674	1.320	
THALLIUM-208	5	pCi/L	2.87±5.26	UJv 5.46	0.528±1.51	2.71	2.43±1.92	UJv 3.83	1.21±4.69	5.160	
THORIUM-234	200	pCi/L	149±171	UJv 172	0.00±152	UJv 117	0±38.6	60.1	193±129	151.000	
TRITIUM	300	pCi/L	108±118	UJv 198	282±120	UJv 197	-37.1±114	UJv 196	-0.0312±.10	0.184	
URANIUM-235	25	pCi/L	7.01±19	28.7	11.2±9.71	UJv 17.0	8.41±11.2	20.1	2.54±14.2	24.600	
URANIUM-238	500	pCi/L	149±171	UJv 172	234±152	UJv 95.3	0±38.6	60.1	193±129	151.000	

QA = Samples taken as part of the quality assurance program.

D = Duplicate sample.

-- = Not Analyzed.

APPENDIX C
MAPS OF MAXIMUM COC CONCENTRATIONS
FROM HYDROPUNCH™ DATA

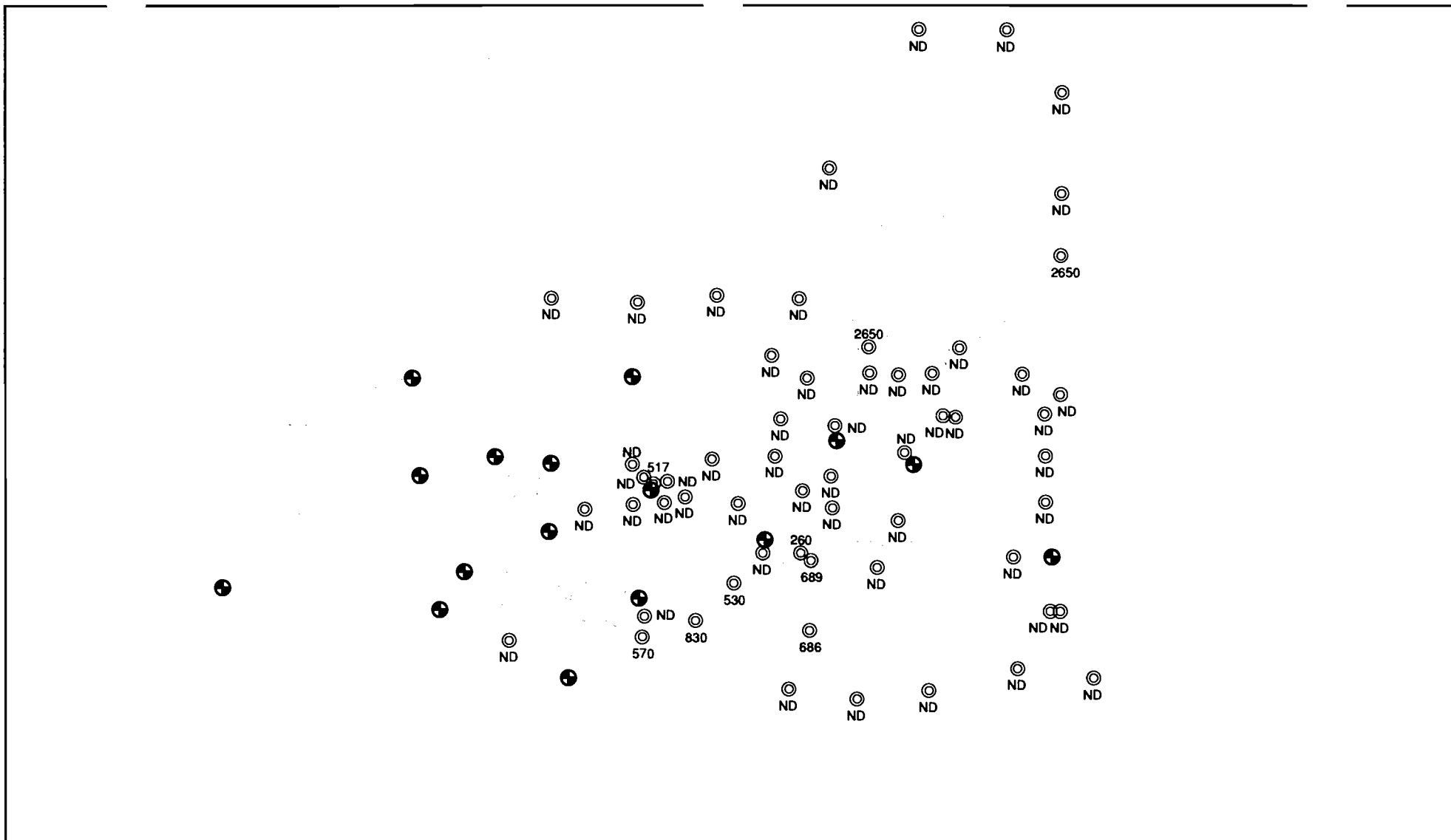


LEGEND

- Monitoring Wells
- ⊙ Hydropunch Locations

MAXIMUM CHLOROFORM CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2

1998 Annual Water Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California
 Figure C-2



LEGEND

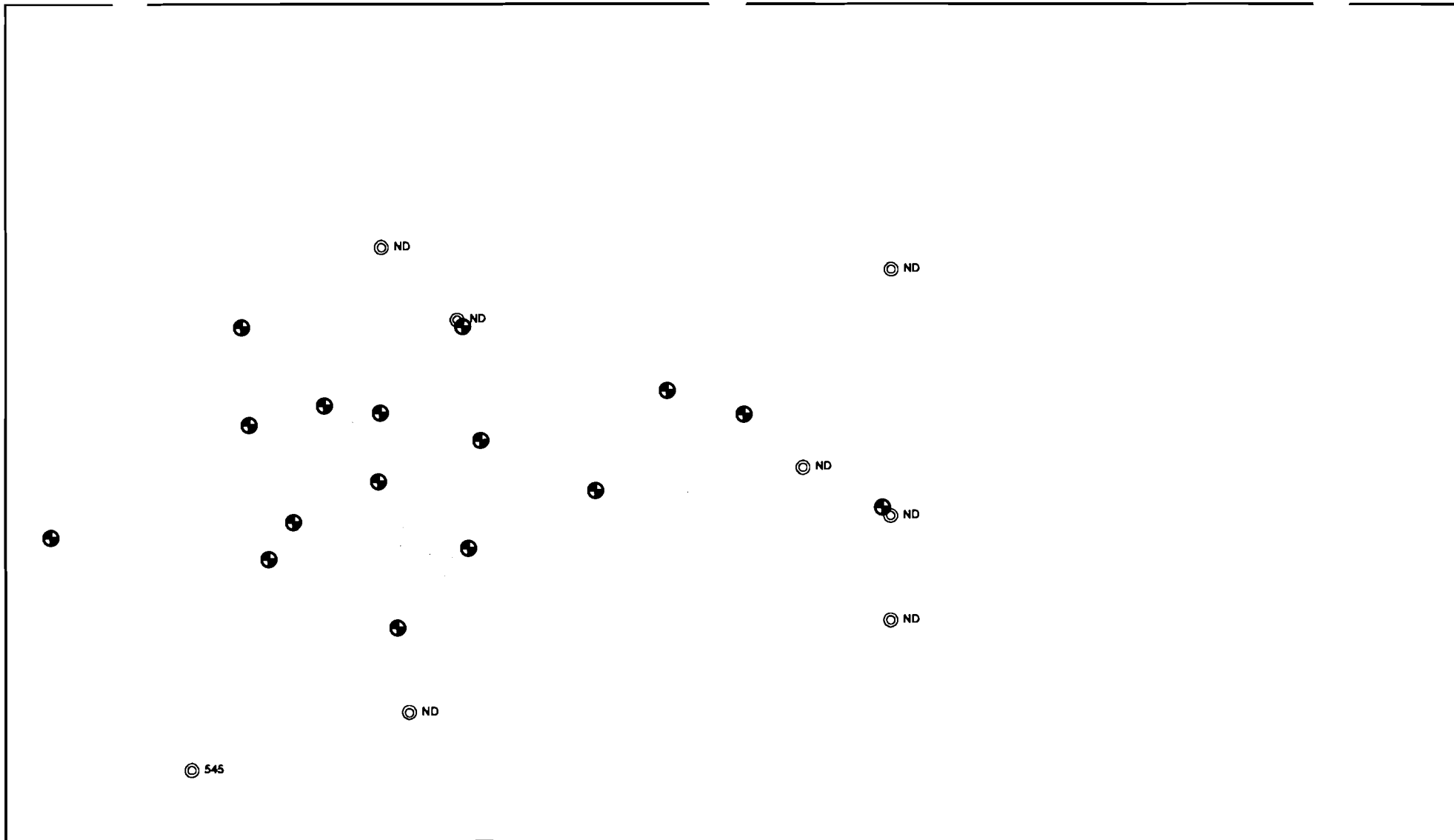
- Monitoring Wells
- ⊙ Hydropunch Locations

MAXIMUM TRITIUM CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2

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Davis, California

Figure C-4

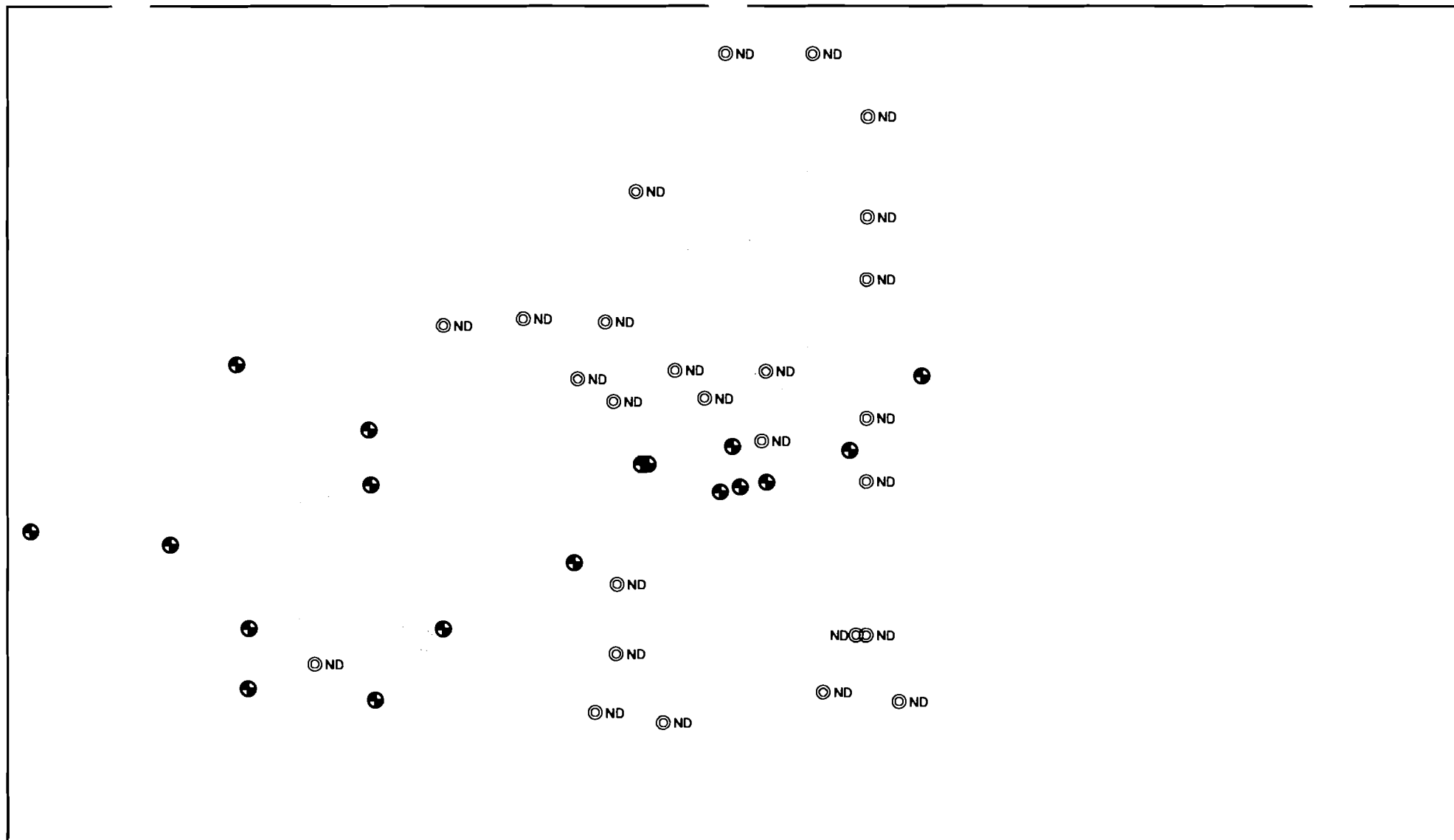


LEGEND



- Monitoring Wells
- Hydropunch Locations

MAXIMUM CARBON-14 CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 1

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 Davis, California



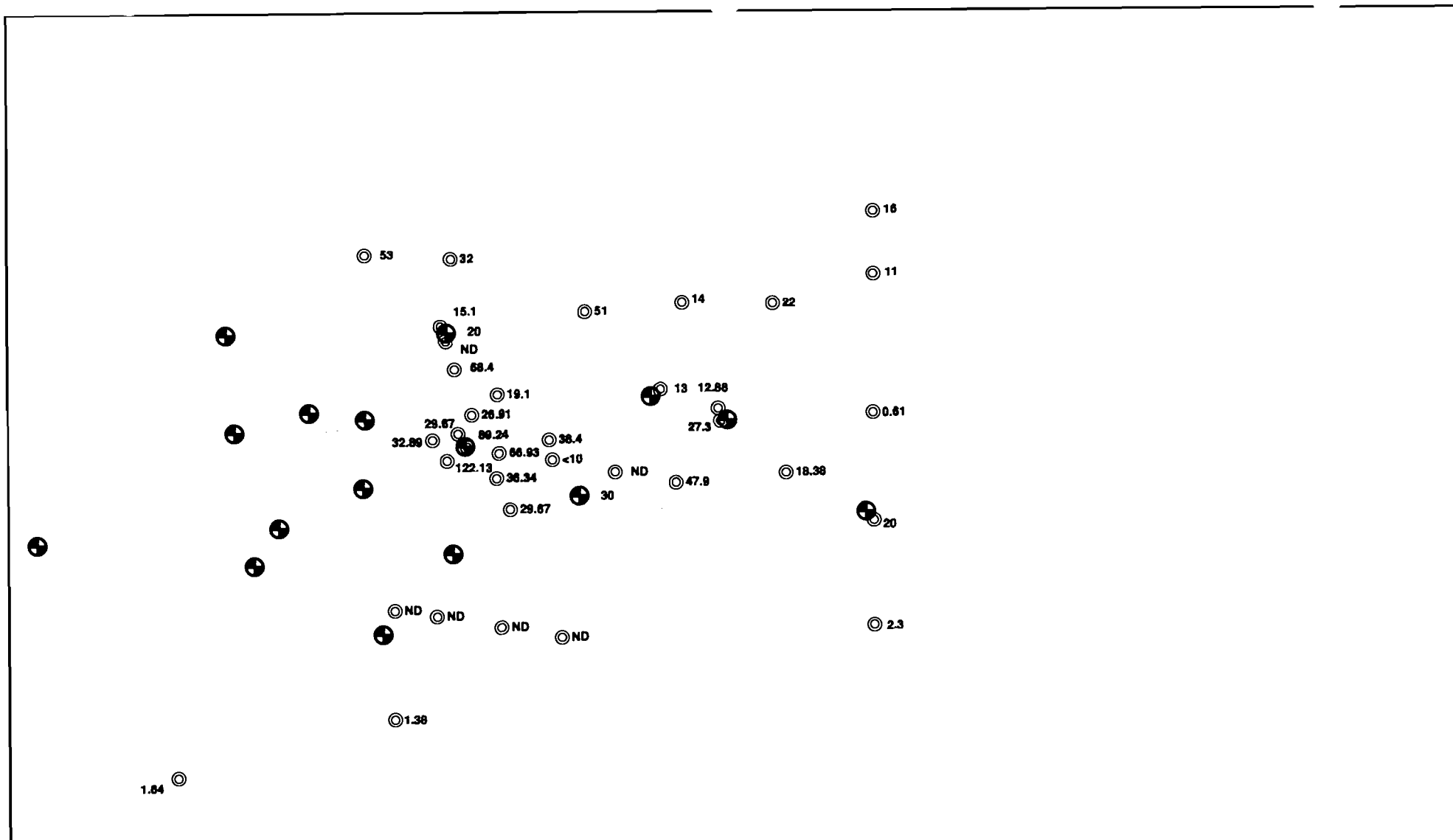
LEGEND

 Monitoring Wells
 Hydropunch Locations

MAXIMUM CARBON-14 CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2

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 Davis, California

Figure C-6

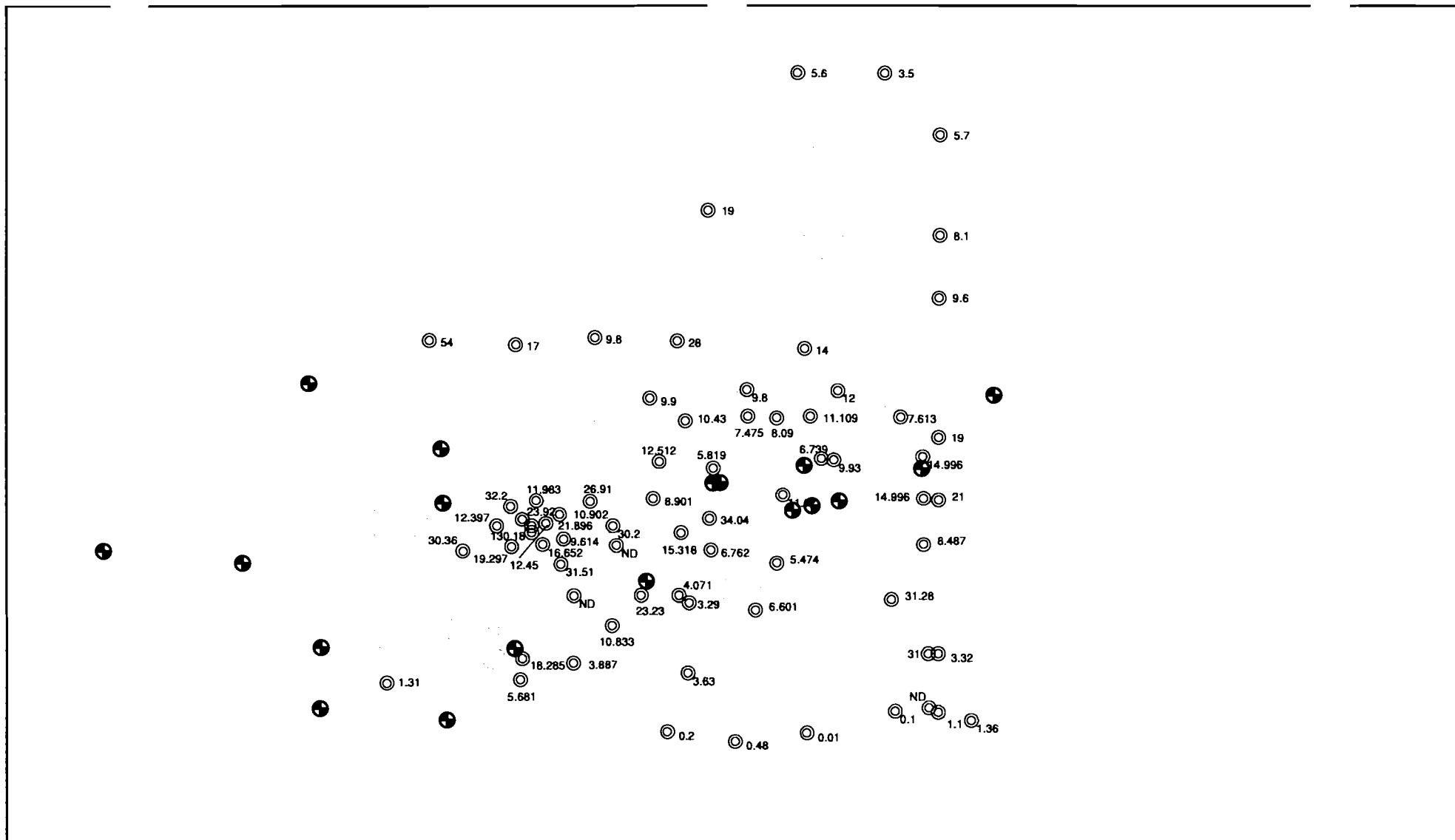


MAXIMUM NITRATE (AS N) CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 1

1998 Annual Water Monitoring Report
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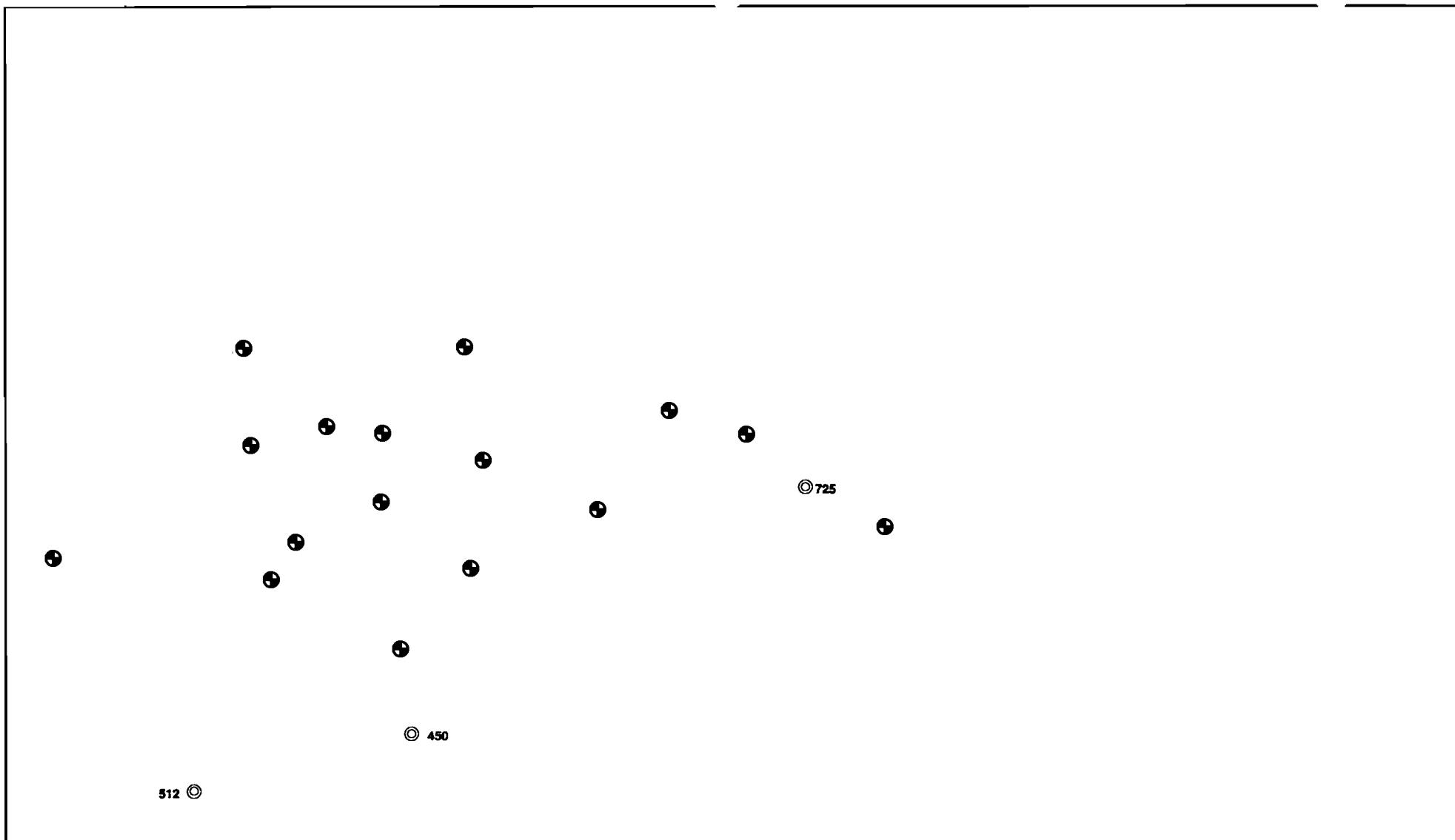
Davis, California

Figure C-7



MAXIMUM NITRATE (AS N) CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2

1998 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California
Figure C-8

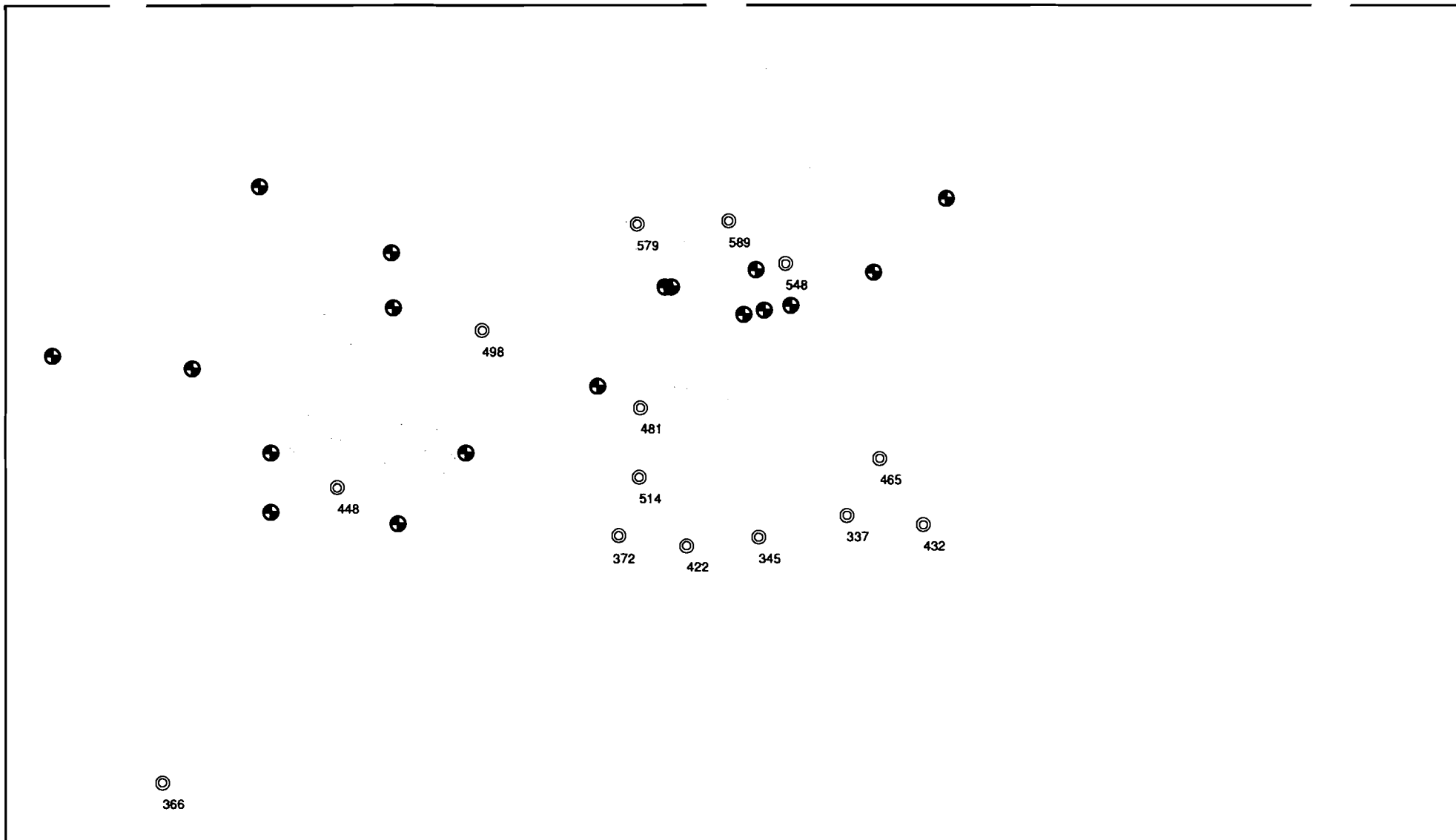


LEGEND



⊕ Monitoring Wells

⊙ Hydropunch Locations

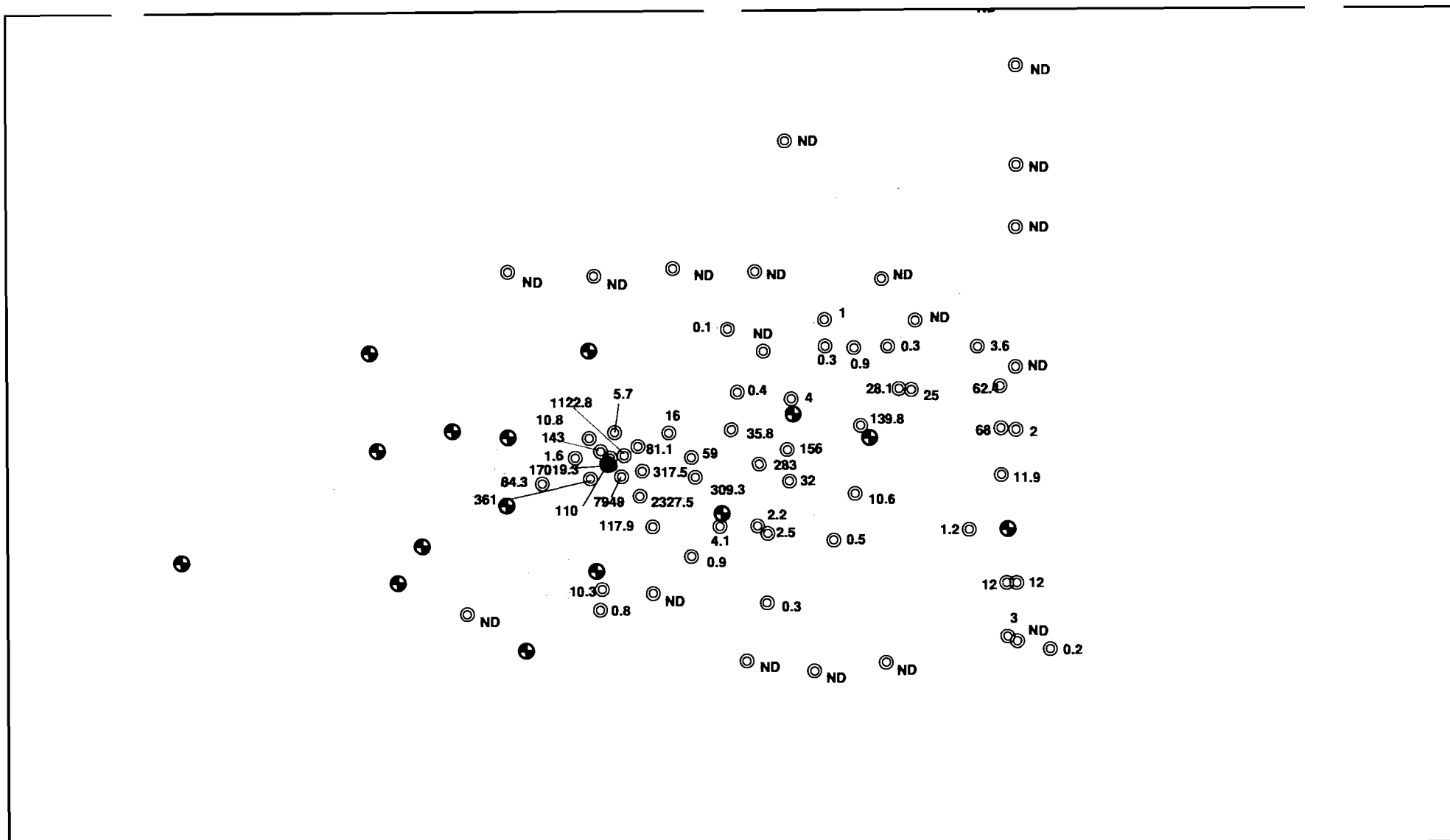
MAXIMUM TOTAL DISSOLVED SOLIDS CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 1



LEGEND

 Monitoring Wells
 Hydropunch Locations

MAXIMUM TOTAL DISSOLVED SOLIDS CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2



LEGEND

- Monitoring Wells
- Hydropunch Locations

MAXIMUM TOTAL AND HEXVALENT CHROMIUM CONCENTRATIONS FROM HYDROPUNCH DATA, HSU 2

1998 Annual Water Monitoring Report
 LEHR/SCDS Environmental Restoration
 Davis, California

APPENDIX D

IRRIGATION WELL 22N ABANDONMENT

APPENDIX D

IRRIGATION WELL 22N ABANDONMENT

D1.0 Introduction

This appendix presents the results of the activities completed during the abandonment of the former Nishi irrigation supply well (22N) located downgradient of the Laboratory for Energy-Related Health Research (LEHR) and South Campus Disposal Site (SCDS) (together referred to as the Site). The scope and methods for abandoning well 22N were presented in the Off-Site Well 22N Abandonment Work Plan (Work Plan; Dames & Moore, 1998a). The abandonment was conducted in accordance with the Memorandum of Agreement (MOA) between UC Davis and the United States Department of Energy (US DOE; June 23, 1997). As part of the MOA, UC Davis has agreed to take the lead role in groundwater investigation and remediation at the Site.

The abandonment of well 22N was conducted as an interim activity of the ongoing Remedial Investigation (US DOE, 1994). The abandonment of well 22N was previously proposed as part of the selected alternative for the groundwater Interim Removal Action (IRA). The selected alternative consists of extracting groundwater from the second hydrostratigraphic unit (HSU-2), treating groundwater for VOCs by air stripping, and injecting treated water into HSU-2 upgradient of the Site. Because operation of well 22N during the irrigation season creates a groundwater gradient shift and decreased efficiency of the IRA extraction (Dames & Moore, 1997a), implementing the IRA includes abandoning well 22N.

The activities conducted during the abandonment of well 22N are supported by the Revised Field Sampling Plan (Dames & Moore, 1998b) and the Final Revised Quality Assurance Project Plan (Dames & Moore, 1998c). These documents describe standard field procedures and quality control guidelines for conducting LEHR/SCDS Site investigation activities.

D1.1 Background

Irrigation well 22N is located east of the LEHR/SCDS Site boundary near existing monitoring wells UCD2-32 and UCD4-42 (Figure D-1). The total depth of well 22N was reportedly 288 feet below top of casing (TOC). The well was constructed of 16-inch (outside diameter) steel casing.

A videotape survey of the well, provided by Welenco Borehole Video Service, showed that the 16-inch casing was perforated over the intervals of 180 to 185 feet and 250 to 282 feet below TOC. Casing perforations consisted of vertical oxy-acetylene torch cuts measuring approximately six inches in length and spaced approximately 4 inches apart. Slight incrustation was observed over the majority of the well casing and the lower six feet of the well contained silt debris. A caliper log showed an increase in casing diameter below 250 feet to a maximum of 18 inches. In addition, a three to four foot layer of used motor oil was also encountered at the water table at approximately 31 feet below TOC. A 20-inch-diameter steel sleeve was reportedly attached to the well casing from 76 to 180 feet below TOC, creating a dual-casing construction over that interval. The 20-inch casing was reportedly perforated between 92 and 108 feet TOC. This is supported by the California Department of Water Resources (DWR) log for well 22N, which is presented as Attachment 1.

Chemical and hydraulic data were collected in May 1997 during a constant rate pumping test from nearby monitoring wells UCD2-32 and UCD4-33 (now abandoned), irrigation well 22N, and the former Nishi irrigation well 22N1 (now retrofitted as monitoring well UCD4-42). Chemical data indicated that chloroform is present in HSU-4 groundwater downgradient of the two irrigation wells at concentrations ranging from 26 $\mu\text{g/L}$ to 30 $\mu\text{g/L}$. Hydraulic data indicated that the transmissivity of HSU-4 is 14% to 24% of the transmissivity of HSU-2 (Dames & Moore, 1997b).

D1.2 Scope of Well Abandonment Activities

The scope of the abandonment activities as presented in the Work Plan are summarized as follows:

Task 1: Permitting and Site Access – An abandonment permit from the Yolo County Water District and access agreements with off-Site property owners were obtained prior to well abandonment activities.

Task 2: Oil and Fill Removal – A four-foot layer of used motor oil and the silt-like fill from the bottom of the well were removed.

Task 3: Well Abandonment – Well 22N was abandoned by filling the casing and annulus with cement slurry. In general, the well casing was perforated prior to installing the grout under pressure. Perforation was accomplished in three stages by employing a mills knife and explosives.

Task 4: Casing Removal – The section of casing extending five feet below TOC was removed and the resulting cavity was filled with lean grout to the surface.

D2.0 Summary of Field Activities

Field activities conducted for the abandonment of well 22N included permitting and Site access tasks, oil and fill removal, well abandonment, and casing and pad removal. A description of these activities is presented below.

D2.1 Permitting and Site Access

Well abandonment permit number D.98.46 was obtained from the Solano County Department of Environmental Management on October 26, 1998. The permit is required by the County for abandoning an agricultural well. In addition, access for abandoning well 22N was granted in October 1998 by the land owner.

D2.2 Oil and Fill Removal

A four-foot thick layer of used motor oil and a six-foot thick layer of silt debris were removed from the well on October 26, 1998. The used motor oil was located at the water table (approximately 37 feet below TOC) in the well casing. Approximately 65 gallons of oil was removed using bailing methods and was stored in two Department of Transportation (DOT) approved 55-gallon drums for off-Site disposal by a licensed contractor.

Silt debris was located from approximately 282 to 288 feet below TOC and was removed using bailing and airlift pumping methods. After removing the silt debris, the total depth of the well was tagged and confirmed at 288 feet below TOC. Silt debris was spread on the ground surface approximately 20 feet east of the well.

D2.3 Well Abandonment

The abandonment of irrigation well 22N was conducted from October 29, 1998 to January 7, 1999 by Water Development Corporation. In general, the well was abandoned by perforating the casing, and then injecting grout under pressure. Perforation was accomplished in three stages using a mills knife and explosives. Details of the abandonment procedures are discussed below.

A 16-inch-diameter mechanical packer was installed at approximately 247 feet below TOC, just above the existing perforated interval (from 248 to 288 feet below TOC), and inflated with air to a pressure of 200 pounds per square inch (psi) to seal the packer against the inside of the casing. Once the existing well screen and filter pack below 247 feet TOC were isolated, approximately two cubic yards of cement slurry were pumped into the well casing

using tremmie methods. Following grouting, a pressure of 200 psi was maintained for 45 minutes. The packer was then deflated and removed from the well casing. Grout was allowed to set over night and was tagged at 260 feet below TOC the following day.

The casing was then perforated from 248 to 181 feet below TOC using a mills knife. The 10-inch diameter cylindrical mills knife is equipped with a single spike. When hydraulically activated from the surface, it punches a one-inch diameter hole in the side of the casing. The knife was rotated through four 90-degree angles, then raised at one foot intervals to complete perforation. After the mills knife was removed, the mechanical packer was then installed at approximately 180 feet below TOC and inflated with air to a pressure of 200 psi to seal the packer against the inside of the casing. Approximately 5.4 cubic yards of cement slurry were pumped into the well casing using tremmie methods. Following grouting, a pressure of 200 psi was maintained for 45 minutes. The packer was then deflated and removed from the well casing. Grout was allowed to set over night and was tagged at 183 feet below TOC the following day.

The interval with dual casing (from 80 to 180 feet below TOC) was perforated by Cogco Wireline Services, Inc. on November 3, 1998. Perforation was performed over 20 foot sections using detonation cord and jet perf explosives to allow access to the well bore and gravel envelope. By tagging the well after each 20-foot section was perforated, it was determined that formation material and/or filter pack material entered the well and filled the well casing to 76 feet below TOC.

Formation material and/or filter pack material from inside the perforated casing was initially dredged from the well. The "dredge" consisted of a 20-foot section of three-inch diameter steel pipe with a quick connect air compressor fitting close to the base. The dredge was lowered to the top of the material and connected to an air compressor, creating a vacuum. The dredged material was discharged to a 20 cubic yard roll-off bin for off-Site disposal. Dredging was discontinued after approximately eight cubic yards of material was removed from the well and the depth to caved material was tagged at 82 feet below TOC (approximately the same depth tagged before dredging). It was determined that formation and/or filter pack material was entering the well during dredging activities and that air rotary/casing hammer (ARCH) drilling methods would be a more efficient method in removing caved material, while preventing material from entering the well.

The well was then perforated from approximately 75 to 10 feet below TOC using a mills knife, as previously described. ARCH drilling methods were then used to clear the well to 137 feet below TOC and 12-inch diameter temporary drive casing was installed. Approximately seven cubic yards of cement slurry were pumped into the well casing using

tremmie methods and the temporary drive casing was removed. Immediately following grouting to the top of the casing, a steel plate was welded to the top of the well casing to seal the well head and the grout column was pressurized for 60 minutes. The grout was allowed to set over night and was tagged at approximately 0.5 feet below TOC the following day.

D2.4 Casing and Pad Removal

The pad and top five feet of well casing were removed from January 7 to 8, 1999. While removing the pad, a cavity approximately five feet in diameter and ten feet deep was visible. Below ten feet bgs, the cavity appeared to taper to approximately 24-inches in diameter and was tagged to a depth of about 35 feet bgs. Approximately 25 cubic yards of cement slurry were pumped into the cavity using tremmie methods and the cavity was filled to approximately 4.5 feet bgs and allowed to set over night. The top five feet of casing was removed the following day using an oxy-acetylene torch. A "mushroom cap" of grout was installed on top of the well casing to approximately four feet bgs to seal off the original well bore. The remaining cavity was then backfilled with soil to grade.

D3.0 Waste Management

Waste generated from well abandonment activities, oil removal, silt removal, dredging activities, and grouting were managed as follows:

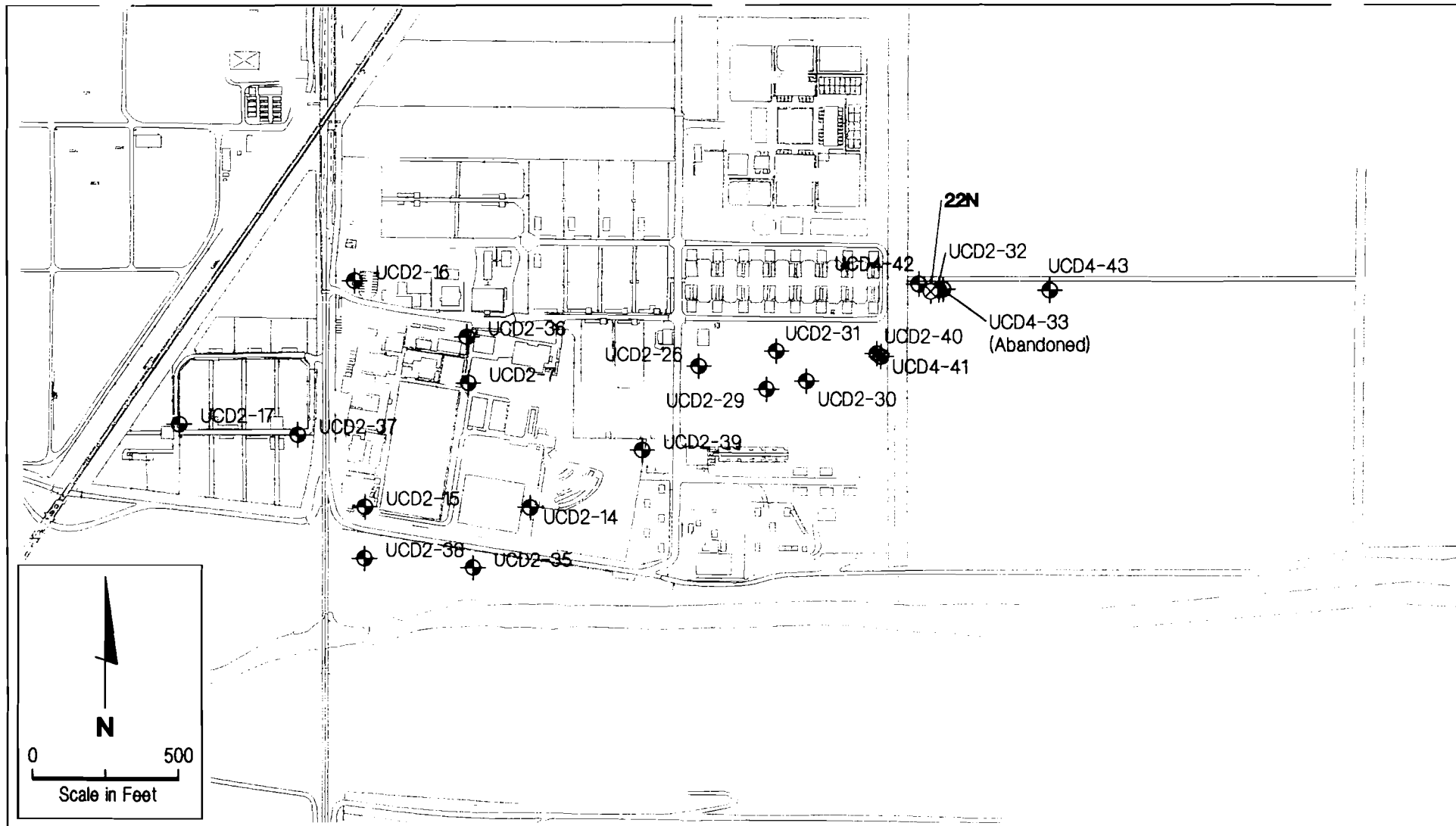
- Waste oil removed from the well was contained in 55-gallon drums for disposal off-Site.
- Silt generated during the abandonment process was spread on the ground surface approximately 20 feet east of the former well.
- Fluids generated during the abandonment process were disposed in a shallow pit near the former well.
- Dredged sand and gravel removed from inside the well casing was contained in a 20 cubic yard roll-off bin and disposed off-Site by the drilling subcontractor.
- Demolition debris from removing the casing and well pad were disposed off-Site.

D4.0 Summary

The abandonment of irrigation well 22N was conducted from October 29, 1998 to January 7, 1999. In general, the well was abandoned by perforating the casing, and then injecting grout under pressure. Perforation was accomplished in three stages using a mills knife and explosives. The pad and top five feet of well casing were then removed and a "mushroom cap" of grout was placed on top of the original well bore to approximately four feet bgs. The well was then backfilled with soil to grade.

D5.0 References

- Dames & Moore, 1997a. Removal Action Work Plan – Groundwater Interim Removal Action, LEHR/SCDS Environmental Restoration, Davis, California.
- Dames & Moore, 1997b. Off-Site Monitoring Well Installation Work Plan, LEHR Environmental Restoration. August 29, 1997.
- Dames & Moore, 1998a. Off-Site Well 22N Abandonment Work Plan, LEHR Environmental Restoration. October 5, 1998.
- Dames & Moore, 1998b. Revised Field Sampling Plan, UC Davis Additional Field Investigations, LEHR/SCDS Environmental Restoration, Davis, California.
- Dames & Moore, 1998c. Final Revised Quality Assurance Project Plan, UC Davis Additional Field Investigations, LEHR/SCDS Environmental Restoration, Davis, California.
- United States Department of Energy (US DOE), 1994. Final Draft Remedial Investigation/ Feasibility Study Work Plan, LEHR/SCDS Environmental Restoration, Davis, California.
- United States Department of Energy (US DOE), 1997. Memorandum of Agreement between the United States Department of Energy and the Regents of the University of California Regarding the Investigation and Remediation of the Laboratory for Energy Related Research at the University of California Davis. June 23, 1997.



EXPLANATION

- ⊕ UCD2-17 HSU-2 Monitoring Well
- ⊕ UCD4-33 HSU-4 Monitoring Well
- ⊗ 22N Irrigation Well

ATTACHMENT 1

22N WELL LOG

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(Per California Water Code Section 13750.5-13755)